



FAIRFAX TOWN COUNCIL MEETING STAFF REPORT

MEETING DATE:	July 12, 2023
PREPARED FOR:	Mayor and Town Council
PREPARED BY:	Loren Umbertis, Public Works Director
SUBJECT:	Adopt Resolution authorizing Town Manager to execute contracts with CSW/ST2 and BKF Engineers to develop Construction Documents and Specifications for multiple Storm Drain Improvement Projects in Fairfax

RECOMMENDATION

Adopt Resolution authorizing the Town Manager to execute contracts with CSW/ST2 and BKF Engineers to develop Construction Documents and Specifications for multiple Storm Drain Improvement Projects in Fairfax

BACKGROUND

In Fairfax, the Storm Drainage system has not seen significant review or improvements in many years. During the last winter storms of 2022 and 2023, in various locations, the stormwater collection system was unable to handle all of the flows leading to localized flooding on Sir Francis Drake at Kent and Belle Streets, along Park Road from Spruce to Wreden, and at Rockridge and Iron Springs. In all three cases, the amount of stormwater exceeded the capacity of the storm drainage system resulting in significant mud and debris left upon the roadway and some water intrusion into private property. Staff recommends that the Town engage the services of civil engineering design firms to evaluate the existing storm drainage system to determine if the capacity is sufficient and if improvements can be made to increase capacity and flows and reduce the possibility of future flooding and impacts upon the community.

DISCUSSION

During the storms between December 2022 and March 2023, Fairfax experienced significant rains over a period of many days that exceeded the existing storm drainage system leading to localized flooding and impacts upon private property owners and traffic.

At Sir Francis Drake and Kent, rainfall exceeded the capacity of the existing storm drains leading to localized flooding on Sir Francis Drake and Belle Ave and Kent Ave. Staff observed that the storm drains along Kent were unable to accept all of the flow and at the base of Belle Avenue, a sump pump placed by Staff in an existing storm drain was unable to keep up with the flow of surface water from Kent avenue. Staff believes that improvements can be made to increase the capacity of the storm drainage system to reduce the possibility of future flooding and the reliance upon electrical sump pumps to handle the flow of stormwater.

Along Park Road, a significant amount of stormwater comes from Spruce Road and Frustuck Avenue that brings along with it mud and debris that collects on Park Road. There is limited underground conveyance of stormwater along Park Road resulting in significant surface flow which impacts vehicular and

pedestrian traffic and results in the deposit of mud and debris along the street and gutters which required significant staff time and contractor assistance for cleanup once the storms had abated.

At Rockridge and Iron Springs, a culvert underneath a bridge at that location was overwhelmed by significant stormwater and debris from the increased flow of Bothin Creek that resulted in water overtopping the culvert and caused water, mud and debris to flow down Rockridge to Manor Avenue impacting private property owners and requiring Staff and outside contractors to use two full days to remove the mud and debris from the streets and roads.

In order to prevent or mitigate future issues similar to those described above, Staff recommends that civil engineering firms be engaged to perform surveys and analysis of the existing storm drainage system and provide recommendations for the improvement, repair and/or expansion of the system. Staff reached out to three civil engineering firms and solicited proposals for the projects described above. The proposals from the firms are as noted below:

Project	CSW/ST2	BKF Engineers	Harris and Associates
SFD and Kent	\$30,750	\$33,375	\$72,200
Park Road	\$29,750	\$69,880	\$92,110
Rockridge	\$16,950	No Bid Provided	\$31,430

Staff recommends engaging the services of CSW/ST2 for the Park and Rockridge projects based upon their experience and their understanding of the scope of work and Staff recommends that BKF Engineers be selected for the SFD and Kent project in order to evaluate their work product and not have the Town reliant solely upon one design firm for storm drainage projects. BKF Engineers is qualified and familiar with the Town of Fairfax and Marin County and although their proposal is slightly higher, it is beneficial for the Town to utilize multiple resources to ensure quality work and competition.

In addition to the evaluation of the existing storm drainage system and its capacity, the Town is also required to provide a level of treatment of stormwater before it reaches waters of the State that include the capture of trash that is collected and conveyed as water runs along gutters and streets but also to provide stormwater filtration in the form of bioretention swales to reduce pollution within creeks and streams. As part of the scopes of work for all of the engineering design firms, stormwater treatment options will be assessed and included as practical. The work may include trash capture devices at storm drainage inlets or vaults or passive treatment through filtration bioswales at appropriate locations.

FISCAL IMPACT

Staff recommends that Council authorize the Town Manager to execute design agreements with CSW/ST2 for the Park Road project in the amount not to exceed \$29,750 and the Rockridge project not to exceed \$16,950 and with BKF Engineers for the SFD/Kent Ave project not to exceed \$33,375. The total of these three projects shall not exceed \$80,075. Funds are available in GL Account Fund 51-827 which will be predominantly funded by the American Rescue Plan Act (ARPA), which was intended to maintain and improve water infrastructure for municipalities. Upon completion of designs, Staff intends to obtain bids to perform construction based upon the Plans and Specifications produced under the associated contracts.

ATTACHMENTS

- A. Resolution
- B. Proposal from BKF Engineers dated June 2, 2023
- C. Proposal from CSW/ST2 dated March 31, 2023

RESOLUTION 23-__

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF FAIRFAX AUTHORIZING THE TOWN MANAGER TO EXECUTE AGREEMENTS WITH CSW/ST2 AND BKF ENGINEERS TO DEVELOP CONSTRUCTION DOCUMENTS AND SPECIFICATIONS FOR MULTIPLE STORM DRAIN IMPROVEMENT PROJECTS IN FAIRFAX

WHEREAS, in Fairfax, the Storm Drainage system has not seen significant improvements in many years; and

WHEREAS, during winter storms of 2022 and 2023 storm water flows led to localized flooding on Sir Francis Drake at Kent and Belle Streets, along Park Road from Spruce to Wreden, and at Rockridge and Iron Springs; and

WHEREAS, in all three cases, the amount of stormwater exceeded the capacity of the storm drainage system; and

WHEREAS, in order to prevent or mitigate future issues civil engineering firms be engaged to perform surveys and analysis of the existing storm drainage system and provide recommendations for the improvement, repair and/or expansion of the system; and

WHEREAS, Staff solicited proposals from three local civil engineering design firm and received the following proposals; and

WHEREAS, CSW/ST2 is selected for the Park Road project in the amount not to exceed \$29,750 and the Rockridge project not to exceed \$16,950; and

WHEREAS, BKF Engineers is selected for the SFD/Kent Ave project not to exceed \$33,375; and

WHEREAS, the total of these three projects shall not exceed \$80,075 to be used from American Rescue Plan Act (ARPA), which was intended to maintain and improve water infrastructure for municipalities; and

NOW, THEREFORE, BE IT HEREBY RESOLVED, that the Town Council of Fairfax authorizes the Town Manager to execute agreements with CSW/ST2 and BKF Engineers to develop Construction Documents and Specifications for multiple Storm Drain Improvement Projects in Fairfax.

The foregoing resolution was adopted at a regular meeting of the Town Council of the Town of Fairfax held in said Town on the 12th day of July 2023, by the following vote:

AYES:
NOES:
ABSENT:

Chance Cutrano, Mayor

Attest: _____
Michele Gardner, Town Clerk

ATTACHMENT A

June 14, 2023, Revised June 2, 2023
BKF No P20231045-02



Loren Umberis
Public Works Director
Town of Fairfax
142 Bolinas Road
Fairfax, CA 94930
Transmitted Via Email

**Subject: Sir Francis Drake Boulevard Storm Drain Improvements
Town of Fairfax
Civil Engineering and Land Surveying Proposal**

Dear Loren:

BKF Engineers welcomes the opportunity to submit this proposal for civil engineering and land surveying services associated with the storm drain improvements near the Sir Francis Drake Boulevard and Kent Avenue project located in the Town of Fairfax, California. To arrive at the estimated effort required by our office for this project, we have outlined a proposed scope of services, identified assumptions, and determined a level of effort fee based on our understanding of the project.

I. PROJECT UNDERSTANDING

Based on our meeting with you to discuss this project, we understand the project as follows:

The Town has experienced nuisance ponding at various location at Sir Francis Drake Boulevard, Kent Avenue, and Hill Avenue. The ponding is believed to be associated with a deficient storm drain system, and may be attributed to lack of inlets, inefficient storm drain routing, and a storm drain low point currently outfitted with a sump pump to expel water. The affected storm drain system is not well documented and the condition of the system is not currently known. The Town is seeking support related to documenting the existing system, reviewing camera data to access existing condition, then design improvements to remedy the ponding.

II. SCOPE OF SERVICES

TASK 1: PROJECT MANAGEMENT

Project Management. BKF will provide general project management services including defining and tracking tasks, status updates, general coordination, and preparation of a detailed schedule showing planned milestones and deliverables to be achieved for completion of the Project. BKF will also track the budget and issue monthly invoices.

Meetings. BKF will conduct a kickoff meeting with Town of Fairfax staff to define communication protocols and reaffirm project scope goals, schedule and budget. Through the design phase, BKF will schedule regular progress meeting to discuss the status of the project, upcoming efforts, issues, coordination items, and other relevant information. For this project, we have assumed up to eight (8) combined staff hours for meetings. Agendas, action logs, updated project schedules, and meeting minutes will be prepared and distributed. We will also maintain frequent and timely communication with Town staff throughout the duration of the project.

ATTACHMENT B

BKF ENGINEERS

4040 Civic Center Drive, Suite 530, San Rafael, CA 94903 | 415.930.7960

Quality Assurance/Quality Control (QA/QC). BKF will perform quality control checks for each submittal in accordance with BKF's Quality Manual prior to submitting to Town. BKF's Quality Control Manger will review our in-house work at each milestone of the project to ensure quality and contract compliance. All plan review comments are documented and formally responded to the form of a comment response letter and/or comment response markups.

TASK 2: DATA COLLECTION

Record Drawings and Field Review: BKF will require and review as-built information for the project site to become familiar with the utility network in the project area. BKF will visit the site with Town staff to review the existing site constraints and conditions. We will note any potential challenges and confirm that the proposed project can incorporate Town staff recommendations and direction. Anticipated variations from Town standards will be identified at this time.

BKF will contact the Town and utility (water, sewer, storm, and PG&E) companies that serve the site or have utilities within the adjacent streets. We will gather the available record drawings and/or block maps to depict the record location of the utilities superimposed onto the topographic survey. BKF will develop and maintain a record of utility notifications including contact numbers, dates or transmittals, and materials transmitted in a Utility Response Matrix.

Topographic Survey: BKF will provide the field work to collect select topographic survey data within the project limits. The limits of the topographic survey will generally follow the outline in the graphic below. The topographic survey will be comprised of identified visible site features such as curbs, pavements, fences, traffic signals, lights, utility poles, trees 4-inches and larger in diameter and visible utility infrastructure deemed by BKF to be critical to the elements of the contemplated drainage design project. Elevations of existing facilities will be shown at select locations and will not be all-inclusive or comprehensive.



Utility infrastructure within the mapping limits, including manholes, valves, hydrants, meter boxes, storm drain and marked utilities, if encountered during the course of our field survey, will also be identified. The basic routing,



inverts and orientation of the on-site gravity utilities will be identified based on field evidence and any available plans provided if to BKF prior to commencement of the survey

The mapping will locate and delineate survey monuments encountered during the field survey. Monuments at risk of disturbance will be quantified for line item bid forms and the project specifications.

The vertical control for the survey will be tied to benchmarks in the project vicinity and related to the North American Vertical Datum of 1988 (NAVD88), unless otherwise agreed upon in writing prior to commencement of the survey.

The horizontal location and rotation of the mapping is anticipated to be on an "assumed" coordinate system otherwise agreed upon in writing prior to commencement of the survey.

Boundary and right of way surveying is not included. Boundary information will not be shown on the mapping or construction documents. Based on a review of the available records, boundary determination and delineation may be a significant effort and will require a Record of Survey in accordance with the California Professional Land Surveyor's Act. Boundary surveying and delineation can be provided as an additional service.

TASK 3: HYDROLOGY AND HYDRUALICS MEMORANDUM

Hydrology and Hydraulics Memorandum: BKF will prepare a brief memorandum summarizing our calculations and findings relative to anticipated storm drain capacity. We will analyze runoff flow rates for the 10-year and 100-year storm events. We will prepare hydraulic calculations to assess the capacity of the existing storm drain system and to support design of the new storm drain improvements.

TASK 4: CONSTRUCTION DOCUMENTS

Construction Documents: BKF will coordinate with City staff to establish recommended design criteria for the storm drain improvements. BKF will lead discuss with Town staff any ancillary improvements associated with the storm drain improvements, such as sidewalk or curb ramp repairs impacted by the work.

Storm drain improvement plans will be submitted to the Town for review at the 50%, 90% and 100% level of completion. BKF will prepare 20-scale plan and profile sheets for the storm drain replacement and will reference public standards for installation and inlet structure details. We are expecting to prepare the following drawings to illustrate the project improvements:

- Cover Sheet (1 sheet)
- Notes & Legend (1 sheet)
- Demolition and Erosion Control Plan (2 sheets at 20-scale)
- Storm Drain Plan and Profile (2 sheets at 20-scale)
- Hardscape Repair Plan (2 sheets at 20-scale)
- Construction Details (1 sheet)

Engineer's Cost Opinion: To accompany the storm drain improvement plans, we will prepare an Engineer's Opinion of Probable Construction Costs with each design milestones. Since civil related work will need to comply with the local agency technical specifications, we will delineate specific materials and guidance within the improvement plans rather than within a separate civil specification booklet.



III. SCOPE QUALIFICATIONS AND ASSUMPTIONS

BKF Engineers' services are limited to those expressly set forth in the scope. We understand that BKF will have no other obligations or responsibilities for the project except as provided in this proposal letter, or as otherwise agreed to in writing. BKF will provide the scope of services consistent with, and limited to, the standard of care applicable to such services. Any participation in non-adversarial procedures, or other right to repair items, is considered as additional services. For the scope of work identified, we have assumed the following:

- 1) Basis of Design and Site Information
 - a) Existing Utilities: Unless otherwise indicated or provided by others, any existing utilities identified on BKF's drawings/plans are based on information obtained by BKF, or provided to BKF, and may not be accurately documented in their horizontal location or vertical profile. Other utilities may be present that were not disclosed. BKF highly recommends that critical facilities be underground service alert (USA) located and potholed during design or prior to construction.
 - b) Potholing: Potholing services are not included in this proposal unless specifically identified.
 - c) Camera Assessment: The Town will be responsible for procuring the services of a utility inspection company to camera the existing storm drain system to support the condition assessment. The camera inspection will be comprehensive, clear and locatable relative to above ground facilities. If the data is unclear and additional investigations are required, BKF can assist with the investigations as an additional service.
 - d) Pump Stations: Pump station design (electrical, mechanical, plumbing, and sitework) is not included in the basic scope of services. We can provide pump station design service as an additional scope item at your request.
- 2) Meetings
 - a) Meetings: Meetings are assumed to be held in the Bay Area or via remote conference. Meeting time requested beyond what we have budgeted is not included in this proposal.
- 3) Phasing, Delivery and Deliverables
 - a) Phasing: The project will be designed and constructed in one phase and that construction phasing plan(s), or interim condition plans, will not be required for this project. Proposal does not include preparing and processing split construction permits for demolition, rough grading, backbone utilities, etc.
 - b) Drawings: All drawings will be prepared in AutoCAD format. We will submit copies of all drawings in both electronic and paper format.
 - c) Building Information Modeling (BIM): We have not included time to convert civil 3D design or existing conditions AutoCAD files into BIM model files. We have assumed all conversions will be by the architect.

IV. SCHEDULE

We are ready to begin work on this project immediately following formal authorization to proceed.



V. COMPENSATION

1. SCOPE OF WORK

BKF proposes to provide the services on a Time and Materials basis. We will invoice for our services monthly per task summarized as follows:

Task	Description	Fee
1	Project Management	\$6,010
2	Data Collection	\$13,830
3	Hydrology and Hydraulics Memorandum	\$1,985
4	Construction Documents	\$11,400
Total Labor Fee		\$33,225

In addition, please budget \$150 for reimbursable expenses. Reimbursable expenses are anticipated for reproduction, mileage, express and messenger deliveries, and computer deliverable plots. Reimbursable expenses will be billed on a cost plus 10-percent markup basis.

For tasks requested by the Town not defined in this scope of services, BKF will identify them as potential extra work. We can provide a scope and fee for these items or they may be tracked separately as extra work and billed on a time and materials per our attached rate schedule. BKF, at its sole discretion may re-allocated budgets between individual tasks, but the total labor fee limit will not be exceeded without authorization from the Town.

Thank you for the opportunity to present this proposal. We look forward to assisting in developing this project. Please contact me at 415-930-7964 if you have any questions regarding our scope of services.

Respectfully,
BKF Engineers



Jason Kirchmann, PE, PLS, QSD/P
Principal / Vice President



BKF ENGINEERS PROFESSIONAL SERVICES RATE SCHEDULE
EFFECTIVE JANUARY 1, 2023

<u>CLASSIFICATION</u>	<u>HOURLY RATE</u>
PROJECT MANAGEMENT	
Principal	\$288.00
Senior Associate Principal	\$268.00
Associate Principal	\$260.00
Senior Project Manager Senior Technical Manager	\$253.00
Project Manager Technical Manager	\$247.00
Engineering Manager Surveying Manager Planning Manager	\$228.00
TECHNICAL STAFF	
Senior Project Engineer Senior Project Surveyor Senior Project Planner	\$212.00
Project Engineer Project Surveyor Project Planner	\$186.00
Design Engineer Staff Surveyor Staff Planner	\$162.00
BIM Specialist I, II, III	\$162.00 - \$186.00 - \$212.00
Technician I, II, III, IV	\$154.00 - \$164.00 - \$180.00 - \$194.00
Drafter I, II, III, IV	\$121.00 - \$133.00 - \$143.00 - \$159.00
Engineering Assistant Surveying Assistant Planning Assistant	\$101.00
FIELD SURVEYING	
Survey Party Chief	\$212.00
Instrument Person	\$182.00
Survey Chainperson	\$136.00
Utility Locator I, II, III, IV	\$110.00 - \$156.00 - \$187.00 - \$213.00
Apprentice I, II, III, IV	\$83.00 - \$112.00 - \$124.00 - \$132.00
CONSTRUCTION ADMINISTRATION	
Senior Consultant	\$277.00
Senior Construction Administrator	\$241.00
Resident Engineer	\$179.00
Field Engineer I, II, III	\$162.00 - \$186.00 - \$212.00
FUNDING & GRANT MANAGEMENT	
Director of Funding Strategies	\$198.00
Funding Strategies Manager	\$181.00
Funding/Research Analyst I, II, III, IV	\$124.00 - \$144.00 - \$153.00 - \$168.00
PROJECT ADMINISTRATION	
Project Coordinator	\$135.00
Senior Project Assistant	\$117.00
Project Assistant	\$103.00
Clerical Administrative Assistant	\$87.00

Expert witness rates are available upon request.

Subject to the terms of a services agreement:

- Charges for outside services, equipment, materials, and facilities not furnished directly by BKF Engineers will be billed as reimbursable expenses at cost plus 10%. Such charges may include, but shall not be limited to: printing and reproduction services; shipping, delivery, and courier charges; subconsultant fees and expenses; agency fees; insurance; transportation on public carriers; meals and lodging; and consumable materials.
- Allowable mileage will be charged at the prevailing IRS rate per mile.
- Monthly invoices are due within 30 days from invoice date. Interest will be charged at 1.5% per month on past due accounts.
- The rates shown are subject to periodic increases, including January 1st of each year.

Date: March 31, 2023

File: 2300142

Loren Umbertis, Public Works Director
Town of Fairfax
142 Bolinas Road
Fairfax, CA 94930

via email only
lumbertis@townoffairfax.org

RE: FAIRFAX– STORM DRAIN IMPROVEMENT PROJECTS

Dear Loren,

The recent significant storm events exposed inadequate capacity within portions of the Town's storm drain system that lead to excessive erosion and flooding on private and public properties. To mitigate liability associated with storm drain damages, the following areas were identified for possible enhancements:

- Park Road (Peri Park to Spruce Road)
- Rockridge Rd (East of Iron Springs Rd)
- Sir Francis Drake Blvd (Kent Ave Intersection)

Funding for the project(s) may come from grant or local funding. The Town acquired approximately \$1.5 million of funding from ARPA for infrastructure improvements to be completed by December-2026. Additional funding sources to consider include Wildlife Conservation Board and State Coastal Conservancy grant programs for flood control. Marin Countywide Stormwater Pollution Prevention Program (MCSTOPPP) offers grant funding associated with trash capture and storm water treatment.

CSW/Stuber-Stroeh Engineering Group, Inc. (CSW|ST2) appreciates the opportunity to provide design and survey services for the various storm drain improvements. We will assist the Town in obtaining additional grant funding. Deliveries include technical memorandums, preliminary layout plans, and phased (95% and 100% Bid Set) construction documents.

SCOPE OF SERVICES

The following comprises our proposed scope of services and budgetary estimate.

Park Road Storm Drain Improvements

The first step includes performing the preliminary engineering task, including topographic survey and hydrology & hydraulic study. Preliminary design and estimate will be prepared for Town review and/or grant funding. Following Town approval, phased construction documents will be prepared for the Town. If requested, we will support Town Staff during the bidding and construction phases under a separate contract agreement.

1. **Topographic Mapping:** Field survey will be performed along the southwesterly portions of the Park Rd and School St. We allocated up to 8 hours for the field survey team. The survey area will include approximately back-of-walk and extend at least 5-feet into the roadway for anticipated storm drain improvements shown on the attached plan. Our crew will measure depth of storm

drain inlets and catch basins. They will locate edge of sidewalk, visible utilities, top and bottom of curb, lip of gutter, grade breaks, and significant trees (trunk diameters > 6-inches).

Our in-house survey team will prepare a topographic base map in AutoCAD dwg format for use in the construction plans. Contour intervals will be 1-foot. CSW|ST2 will assume vertical and horizontal datum unless requested otherwise. Boundary resolution is not included in this proposal.

2. Hydrology & Hydraulic Study: Using the Rational Method, we will prepare hydrologic calculations to estimate storm water runoff for the 10-yr and 100-yr storm events. Additionally, we will prepare hydraulic calculations for design of the new storm drainage system.

Deliverable: Tech Memo of Findings

3. Preliminary Plans & Estimate: Using the topographic base map, we will prepare a preliminary plan that includes layout of drainage improvements, and limits of work. The purpose of this plan is to confirm the layout, utility conflicts, and construction costs. Plan will be prepared using the Town standard title block at a 1-inch = 20-foot scale or as approved by Staff.

Deliverable: 24x36 Preliminary Plans

4. Construction Documents: Construction documents will be prepared for the 95% and bid set submittals. Construction documents include plans, specification, and estimate (PS&E).
 - a. Construction Plans._The construction plan set will include the following:
 - Cover Sheet
 - Curb Ramp Improvement Plan (includes grading, drainage, and layout)
 - Typical Details
 - b. Project Specifications. We will prepare the technical specifications in a format acceptable to the Town. Additionally, we will assist the Town in preparation of the general specifications.
 - c. Estimate. We will prepare a line item estimate for each Town submittal.

Deliverable: 95% and Bid Set Plans, Specifications, and Estimates

5. Project Management: We allocated up to 16 hrs for site meetings and coordination with Town staff. We will support grant-funding efforts for MCSTOPPP by providing exhibits and technical documents necessary.

Rockridge Road Storm Drain Improvements

The first step includes performing a topographic survey of the project area. Preliminary design and estimate will be prepared for Town review and/or grant funding. Following Town approval, phased construction documents will be prepared for the Town. If requested, we will support Town Staff during the bidding and construction phases under a separate contract agreement.

1. Topographic Mapping: Field survey will be performed at the creek crossing along Rockridge Road to the intersection of Iron Springs Rd. We allocated up to 4 hours for the field survey team. The survey area will include existing retaining walls, bollards, top of bank, edge of roadway, and visible utilities for anticipated storm drain improvements.

Our in-house survey team will prepare a topographic base map in AutoCAD dwg format for use in the construction plans. Contour intervals will be 1-foot. CSW|ST2 will assume vertical and horizontal datum unless requested otherwise. Boundary resolution is not included in this proposal.



2. Preliminary Plans & Estimate: Using the topographic base map, we will prepare a preliminary plan that includes layout of drainage improvements, and limits of work. Anticipated drainage improvements include installation of drainage inlets and connections. We will review an option for a trench drain. Additionally, we will support Town staff for improvements (dredging and new trash capture device) within the drainage way. The purpose of this plan is to confirm the layout, identify necessary resource permits, and construction costs. Plan will be prepared using the Town standard title block at a 1-inch = 10-foot scale or as approved by Staff.

Deliverable: 24x36 Preliminary Plans

3. Construction Documents: Construction documents will be prepared for the 95% and bid set submittals. Construction documents include plans, specification, and estimate (PS&E).
 - a. Construction Plans._The construction plan set will include the following:
 - Cover Sheet
 - Curb Ramp Improvement Plan (includes grading, drainage, and layout)
 - Typical Details
 - b. Project Specifications. We will prepare the technical specifications in a format acceptable to the Town. Additionally, we will assist the Town in preparation of the general specifications.
 - c. Estimate. We will prepare a line item estimate for each Town submittal.

Deliverable: 95% and Bid Set Plans, Specifications, and Estimates

4. Project Management: We allocated up to 16 hrs for site meetings, resource permit coordination meeting, and consultation with Town staff.

Sir Francis Drake Blvd Storm Drain Improvements

The first step includes performing a hydrologic study of the watershed area that feeds into storm drain system that backed up at the Kent/Hill Ave intersection during the March storm events. Following this

study, we will make recommendations to enhance the storm drain system. We will prepare preliminary design and estimate for Town review and/or grant funding. Following Town approval, phased construction documents will be prepared for the Town. If requested, we will support Town Staff during the bidding and construction phases under a separate contract agreement.



1. Hydrology & Hydraulic Study: Using the Rational Method, we will prepare hydrologic calculations to estimate storm water runoff for the 10-yr and 100-yr storm events. Additionally, we will prepare hydraulic calculations for assessment of the existing storm drainage system shown in blue below.



Deliverable: Tech Memo of Findings and Recommendations

2. Topographic Mapping: We allocated up to 8 hours for the field survey team. The survey area will be determined based on findings listed in item 1. Our crew will measure depth of storm drain inlets and catch basins. They will locate edge of sidewalk, visible utilities, top and bottom of curb, lip of gutter, grade breaks, and significant trees (trunk diameters > 6-inches).

Our in-house survey team will prepare a topographic base map in AutoCAD dwg format for use in the construction plans. Contour intervals will be 1-foot. CSW|ST2 will assume vertical and horizontal datum unless requested otherwise. Boundary resolution is not included in this proposal.

3. Preliminary Plans & Estimate: Using the topographic base map, we will prepare a preliminary plan that includes layout of drainage improvements, and limits of work. The purpose of this plan is to confirm the layout, identify utility conflicts, and construction costs. Plan will be prepared using the Town standard title block at a 1-inch = 10-foot scale or as approved by Staff.

Deliverable: 24x36 Preliminary Plans

4. Construction Documents: Construction documents will be prepared for the 95% and bid set submittals. Construction documents include plans, specification, and estimate (PS&E).
 - a. Construction Plans._The construction plan set will include the following:
 - Cover Sheet
 - Curb Ramp Improvement Plan (includes grading, drainage, and layout)
 - Typical Details
 - b. Project Specifications. We will prepare the technical specifications in a format acceptable to the Town. Additionally, we will assist the Town in preparation of the general specifications.
 - c. Estimate. We will prepare a line item estimate for each Town submittal.

Deliverable: 95% and Bid Set Plans, Specifications, and Estimates

5. Project Management: We allocated up to 16 hrs for site meetings, supporting grant funding, and consultation with Town staff.

FEES

CSW|ST2 agrees to provide the services described above on a time and expense basis, in accordance with our current Hourly Rates and Billing Policy. Please allow the following budgetary estimates.

Park Road Storm Drain Improvements

1. Topographic Mapping	\$	3,800
2. Hydrology & Hydraulic Study	\$	5,200
3. Preliminary Plans & Estimate	\$	4,200
4. Construction Documents		
a. Construction Plans	\$	9,500
b. Project Specifications	\$	2,100
c. Estimate	\$	1,250
5. Project Management	\$	3,700
SubTOTAL, ITEMS 1-5	\$	29,750

Rockridge Road Storm Drain Improvements

1. Topographic Mapping	\$	2,000
2. Preliminary Plans & Estimate	\$	2,500
3. Construction Documents		
a. Construction Plans	\$	6,000

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b. Project Specifications	\$	1,900
c. Estimate	\$	850
4. Project Management	\$	3,700
SubTOTAL, ITEMS 1-4	\$	16,950

Sir Francis Drake Blvd Storm Drain Improvements

1. Hydrology & Hydraulic Study	\$	8,200
2. Topographic Mapping	\$	3,800
3. Preliminary Plans & Estimate	\$	4,200
4. Construction Documents		
a. Construction Plans	\$	7,500
b. Project Specifications	\$	2,100
c. Estimate	\$	1,250
5. Project Management	\$	3,700
SubTOTAL, ITEMS 1-5	\$	30,750

TOTAL ESTIMATE (PARK, ROCKRIDGE, SFD PROJECTS) \$ 77,450

Invoices for services rendered will be issued on a monthly basis. Payment terms are net 30 days

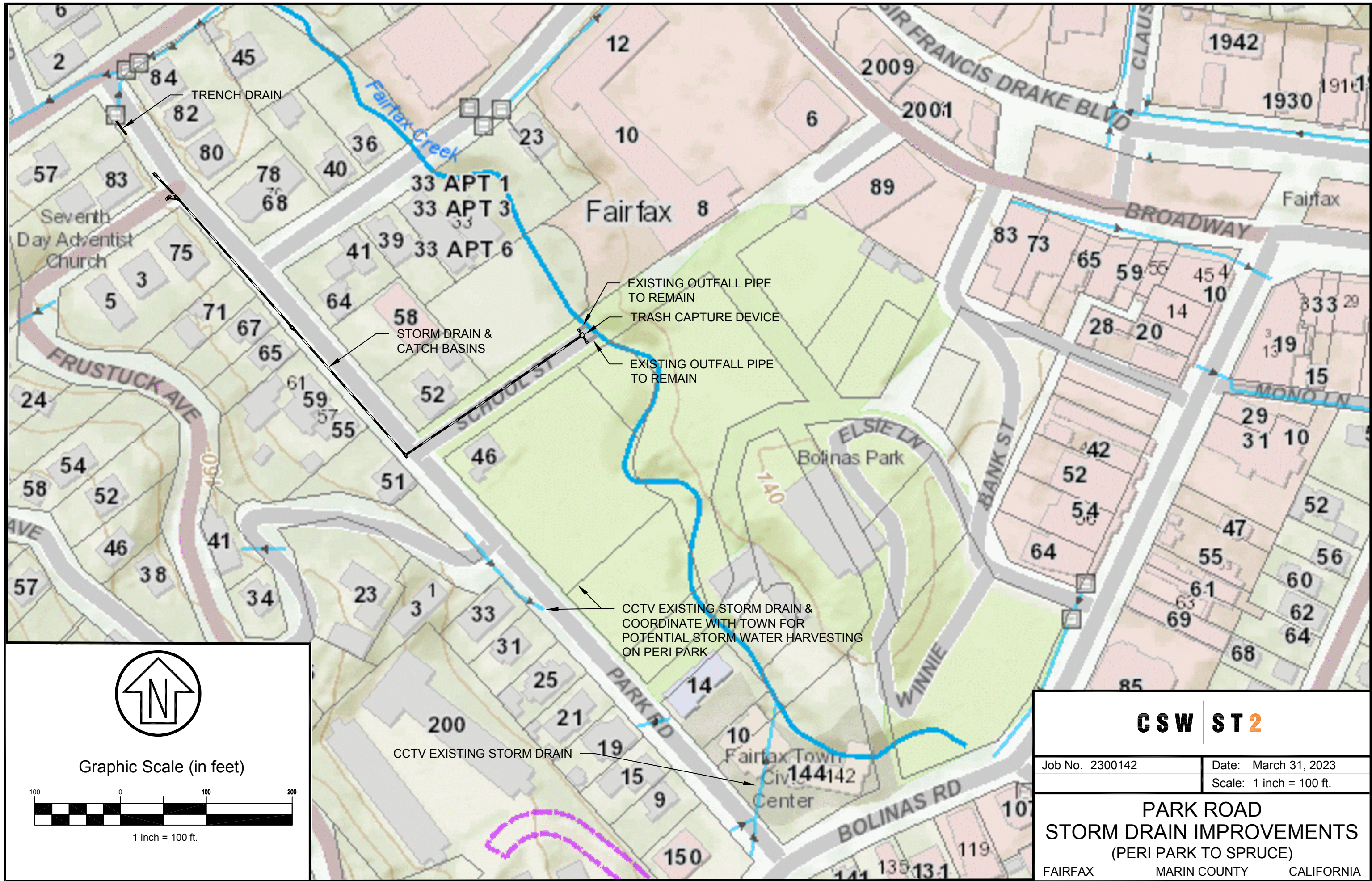
CSW|ST2 can begin work after receiving your authorization. Thank you for considering CSW|ST2 to assist you in the development of your project. We look forward to working with you!

Very truly yours,

CSW/STUBER-STROEH ENGINEERING GROUP, INC.



Richard J. Souza, R.C.E. #67892



CSW | ST 2

Job No. 2300142	Date: March 31, 2023
Scale: 1 inch = 100 ft.	

**PARK ROAD
STORM DRAIN IMPROVEMENTS
(PERI PARK TO SPRUCE)**
FAIRFAX MARIN COUNTY CALIFORNIA

BILLING RATE SCHEDULE

Effective January 1, 2023 – December 31, 2023

ENGINEERING SERVICES HOURLY RATES

Senior Engineer	\$ 193.00
Engineer I, II, III	\$ 138.00, \$ 168.00, \$ 187.00
Technician	\$ 126.00
Engineering Assistant	\$97.00

SURVEY SERVICES HOURLY RATES

Senior Surveyor	\$193.00
Surveyor I, II, III	\$ 138.00, \$ 168.00, \$ 187.00
Technician	\$ 126.00
Surveying Assistant	\$97.00
Two Person Survey Party	\$ 303.00
Survey Party Chief	\$ 209.00
Survey Chainman	\$ 94.00
Survey Apprentice	\$ 80.00 - \$94.00
Aerial Drone Surveyor	\$ 209.00

OTHER PROFESSIONAL RATES

Principal	\$ 248.00 - \$ 276.00
Associate Principal	\$ 236.00
Project Manager	\$ 210.00 - \$ 231.00
Landscape Architect	\$ 150.00
Sr. Landscape Architect	\$ 165.00
Construction Manager	\$ 226.00
Resident Engineer	\$ 166.00
Technical Writer	\$ 133.00
Graphic Illustrator	\$ 126.00
Project Assistant	\$ 97.00

- All expenses for transportation (mileage, bridge fare, etc.) will be charged at the Internal Revenue Service rate plus 10%.
- Filing fees, checking fees, prints, and other outside costs (such as agency submittal/permit fees etc.) will be charged at cost, plus service charges at the rate of 10%.
- Billing will be monthly net 30 days.