

November 18, 2021

Roger Leventhal Marin County Flood Control and Water Conservation District **Department of Public Works** 3501 Civic Center Drive, Room 304 (510) 757-6848 / RLeventhal@marincounty.org

Proposal for Arroyo Avichi-Baccaglio Basin-Scottsdale Marsh and Pond-Lynwood Basin (ABSL) Re: Complex and Nave Gardens Flood Drainage Improvements Feasibility Study

Dear Roger,

Wood Rodgers, Inc. (Wood Rodgers) is pleased to provide flood control planning services to the Marin County Flood Control and Water Conservation District (District) for the ABSL Complex Flood Drainage Improvements Feasibility Study project as well as the flood-prone Nave Gardens Area. The purpose of this project is to evaluate the most feasible improvements to the ABSL complex of open spaces to assist with control of flooding in downtown Novato and the surrounding low elevation neighborhoods (e.g., Nave Gardens).

Wood Rodgers staff have previously modeled the hydrology and hydraulics of this system and developed a geo-database of drainage infrastructure as part of the City of Novato Drainage Master Plan. Wood Rodgers developed the geodatabase after extensive review of as-builts and surveys. The InfoWorks ICM model of the entire system was developed from this geodatabase and Wood Rodgers has been involved in the use and refinement of these models over the years. With Wood Rodgers' intimate knowledge of the ABSL drainage system, extensive drainage master planning experience in Marin County and the Bay Area, and successful track record working collaboratively with the District, we are ideal to perform the feasibility study. We look forward to assisting the District on this important project.

Per your request, the following pages provide the proposed Scope of Work, which is suitable for attaching to the County's Standard Contract. This Scope of Work is proposed to be performed on a Time & Materials (T&M) basis for the sum amount of each task in accordance with the amended on-call contract with the District (dated August 17, 2021). The proposed scope of work and estimated fees will be contracted and invoiced as separate task orders. The estimated fee associated with the scope of work is summarized below.

ТАЅК	ESTIMATED FEE
Task 1 – Project Management	\$ 27,600
Task 2 – Background Review	\$ 10,360
Task 3 – Existing Condition Characterization*	\$ 81,680
Task 4 – Hydrologic and Hydraulic Modeling	\$ 72,140
Task 5 – Alternatives Analysis	\$ 53,795
TOTAL ESTIMATED FEE (without Optional Tasks)	\$ 245,575

TOTAL ESTIMATED FEE (without Optional Tasks)

*Note: Estimated scope and cost for Task 3 is preliminary and will be updated after completion of Task 2.

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Attached to the following Scope of Work are: **Exhibit A**, the Wood Rodgers standard hourly rate schedule for time and material work; and **Exhibit B**, the Cost Estimate for the ABSL Complex and Nave Gardens Flood Drainage Improvements Feasibility Study. To authorize this work as separate task orders, please specify which elements you wish to proceed with and Wood Rodgers will provide the appropriate Task Request Form for District signature.

Sincerely,

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Dan Matthies Vice President, Wood Rodgers, Inc.

SCOPE OF WORK

Arroyo Avichi - Baccaglio Basin - Scottsdale Marsh and Pond - Lynwood Basin (ABSL) Complex and Nave Gardens Flood Drainage Improvements Feasibility Study Project

This Scope of Work is for Wood Rodgers, Inc. (Wood Rodgers) to provide hydrology and hydraulic (H&H) analysis and flood control planning services to the Marin County Flood Control and Water Conservation District (District) for the ABSL Complex Flood Drainage Improvements Feasibility Study project (the Project). The Project intends to evaluate the most feasible improvements to the ABSL complex of open spaces to assist with control of flooding in downtown Novato and the surrounding low elevation neighborhoods, such as Nave Gardens. The Project reach's upstream limit is at the Arroyo Avichi Creek Diversion Structure, just west of Novato Blvd. The Project's downstream limit is at Novato Creek's outlet to San Pablo Bay.

This scope of work includes the following tasks:

- 1. Project Management
- 2. Background Review
- 3. Existing Condition Characterization¹
- 4. Hydrologic and Hydraulic Modeling
- 5. Alternatives Analysis

TASK 1 – PROJECT MANAGEMENT

Wood Rodgers will provide the project management and coordination necessary to develop a feasibility study of flood drainage improvements.

Task 1.1 – Facilitate and Attend Meetings

Wood Rodgers will facilitate and attend the following meetings: one kick-off meeting with District staff, and other stakeholders invited by the District; two public Flood Zone 1 Advisory Board meetings; and one meeting with the Old Town Novato Group. Wood Rodgers will attend these meetings and prepare agendas of discussion topics. Meeting minutes summarizing the items discussed, as well as a list of action items assigned, will be prepared by Wood Rodgers. The Wood Rodgers Principal-In-Charge and Project Manager will attend the kick-off meeting. The overall project objectives, schedule, deliverables, and work plan will be discussed at the kickoff meeting.

Task 1.2 – Perform Routine Coordination

Under this task, Wood Rodgers will perform routine coordination with the District, stakeholders, subconsultants, and its internal team to develop the feasibility study. Bi-weekly progress update emails will be provided to the District project management team throughout the project.

Task 1.3 – Prepare Monthly Status Reports and Invoicing

At the end of each month, Wood Rodgers will prepare a budget/status report outlining the work items performed during the reporting period; budget, schedule, and work progress with respect to the project baseline; and a discussion of upcoming activities scheduled to occur in the subsequent work period. A

¹ The Task 3 scope of work and estimated budget is considered preliminary and will be finalized based on the findings of the Background Review, Task 2.

monthly invoice will be provided with the budget/status report which will include billing for the month, project billing total to date, and remaining budget. Regular coordination with the District and other stakeholders as appropriate, is included as a part of this task.

Task 1 Deliverables:

- a. Meeting Agendas
- b. Meeting Notes
- c. Monthly Invoices

TASK 2 – BACKGROUND REVIEW

Wood Rodgers will perform a desktop review of readily available studies, models, maps, permits, and records of the ABSL Complex system and Nave Gardens. This review will be efficient since Wood Rodgers has already completed extensive review in the development of the facilities geodatabase. This background review will identify data gaps and how to fill those gaps so that subsequent tasks can successfully proceed. Wood Rodgers will review background related to: hydrology and hydraulics, and observed flooding; infrastructure condition, maintenance activities, and operations; GIS databases; and utilities, right-of-way, and topographic surveys. As part of this task, the scope of work for investigations to fill data gaps will be developed and finalized for review by the District. A preliminary draft scope of these investigations is provided in Task 3. Documentation of identified data gaps and the work plans to fill those gaps will be provided in one draft and one final Background Review Technical Memorandum.

Task 2 Deliverables:

a. Background Review Technical Memorandum

TASK 3 – EXISTING CONDITION CHARACTERIZATION

Wood Rodgers will perform work necessary to fill data gaps identified in Task 2 and adequately characterize existing conditions. This characterization will allow for subsequent tasks to proceed. For the purpose of this ABSL Complex and Nave Gardens feasibility study, it is anticipated that the following will be needed to properly characterize existing conditions:

- Water level monitoring for one wet season
- Condition assessment field inspection
- Right-of-Way, topographic and bathymetric survey
- Utility and base map development

Estimated scope and budget for these sub-tasks are provided, however, the final list of work items and their respective workplans is dependent on the results of the Background Review (Task 2). Thus, the scope and budget provided for Task 3 is considered preliminary.

Task 3.1 – Water Level Monitoring

Wood Rodgers will purchase and install water level gages (ADS Echo or equal) to monitor water levels within the ABSL Complex system for one wet season to allow for calibration of the existing condition hydrology and hydraulic model (Task 4). It is anticipated that the monitoring would occur during Water Year 2022 (October 1, 2021 to September 30, 2022). Wood Rodgers is aware that water level data was collected in 2013 and 2014 as part of the City of Novato Drainage Master Plan (DMP) and that this data

included relatively large storm events. Although this data was collected mostly north of the ABSL Complex, it may inform the appropriate number and placement of water level sensors. Final selection of installation locations will consider the currently active water level gages at the Novato Creek USGS flow gage and the local tide gage at San Pablo Bay. The water level data collected during and following storm events will be used to help calibrate the hydrologic and hydraulic model (Task 4). Dry weather water level data will be used to derive model assumptions for appropriate groundwater levels.

For the purposes of this preliminary estimate, it is assumed that a total of **five water level gages** will be installed and monitored. The assumed locations include within: Arroyo Avichi Creek upgradient of the diversion structure; Baccaglio Basin; Scottsdale Pond; Lynwood Basin; and Novato Creek at Hwy 37. It is assumed that water level gages can be readily installed on vertical wall faces associated with concrete headwalls or rectangular concrete box (RCB) culverts with accessibility from land. It is assumed no confined space entry will be required to install the water level gages and installation of framework for mounting of the equipment will be required. The District will inherit the water level gage equipment and all software at the end of the study for their use on future projects. Removal of the water level sensors is not included in the scope and fee, however, Wood Rodgers can provide this service upon request.

Task 3.2 – Condition Assessment Field Inspection

Wood Rodgers will conduct a visual assessment of the ABSL Complex proposed for improvement. The scope of the visual inspections will include the Arroyo Avichi Creek flow diversion; storm drain and culvert inlets and outlets (associated with the diversion, Baccaglio Basin, Scottsdale Marsh and Pond, and Lynwood Basin); and levees and berms (separating Novato Creek from Baccaglio Basin and Lynwood Basin). The visual inspection will include observations of major condition concerns such as: concrete condition (cracking, spalling, corrosion, settlement, delamination, spalling, chloride contamination); localized scour; sediment deposition and characterization; trash accumulation; and vegetation overgrowth. It is assumed that the localized storm drain pipes within Nave Gardens will not be inspected as part of this budget, but that major storm drain outfalls discharging from Novato Blvd will.

Documentation of the visual assessment will include: field inspection defect log; photo map; photographs of all observed deficiencies. Field inspection will be targeted for low tide conditions, if feasible, to maximize what can be visually observed above the water surface.

Task 3.3 – Right-of-Way, Topographic, and Bathymetric Survey

Wood Rodgers will provide a field survey and identify the existing District ROW/easement limits for the ABSL Complex area. It is assumed the adjacent boundary lines can be plotted from record documents and this proposal does not include a boundary resolution for the parcels that make up the project area. It is also assumed that a current title report and/or easement deeds will be provided by the District.

Wood Rodgers will provide ground survey of the inlets and outlets of storm drain, culvert pipe, and diversion structures (invert and soffit) within the ABSL Complex with identification of material type and dimensions. It is assumed that the previous topography for the ABSL Complex terrain will suffice for this study. Thus, aerial imagery and LiDAR survey is not included in this scope, but can be provided if requested by the District for additional budget.

The prior topographic survey does not accurately reflect the ground surface elevations below portions of the Scottsdale Pond and Lynwood Basin that were ponded during the previous aerial survey. Bathymetric

surveys will be performed by Wood Rodgers for these ponded areas to reflect a more accurate below water ground surface. The accuracy of the survey will depend on the water clarity, vegetation, depth, and bottom surface type. Scottsdale Pond will be mapped with a boat equipped with a sonar sensor. We assume this would take a two-person crew one day to complete with equipment rental costs. Mapping the shallower open waters adjacent to marsh in the Lynwood Basin will require an alternative method. Wood Rodgers will shoot as many points distributed throughout the Lynwood Basin as possible in one day using a kayak and GPS equipment. This would provide a subset of points considered adequate for this study. The horizontal and vertical control shall be based on the California State Plane Zone III coordinates and the North American Vertical Datum of 1988 (NAVD 88).

Wood Rodgers will combine the ROW, topographic, and bathymetric surveys to develop a CAD drawing in AutoCAD format. A text file with longitude (x), latitude (y), and elevation (z) data of ground shots from the topographic survey will be provided as well. For optimal data collection, surveys will be timed seasonally to coincide with leaf-off, low tide, and dry conditions, as feasible.

Task 3.4 – Utility and Base Map

Wood Rodgers will compile readily available GIS data of utilities within the ABSL Complex. Utility data will be obtained from the District, if available, and two requests for digital linework will be sent to each appropriate utility owner (e.g., City stormdrains, sanitary sewer, water, electric, gas, and communication). It is assumed that Wood Rodgers will compile the utility map in plan view after receiving data based on the two data request. This will allow for efficient use of budget without extensive time spent coordinating with multiple utility representatives. It is assumed that utilities will be mapped in plan view, but elevation data will not be obtained for this study. The utility map will be combined with the ROW, topographic, and bathymetric survey data to create one base map for the project.

Task 3.5 – Existing Conditions Technical Memorandum

Wood Rodgers will prepare a technical memorandum to document the investigations performed to fill data gaps and summarize existing conditions at the ABSL Complex and Nave Gardens that are relevant to the feasibility study. One draft and one final technical memorandum, incorporating District comments, will be provided. It is anticipated that detailed maps and documentation associated with the investigations will be provided as attachments to the more concise technical memorandum.

Task 3 Deliverables:

a. Existing Conditions Technical Memorandum, with attachments

TASK 4 – HYDROLOGIC AND HYDRAULIC MODELING

Wood Rodgers will perform hydrologic and hydraulic (H&H) modeling for the existing conditions of the ABSL Complex by: (1) refining the ICM model, developed by Wood Rodgers for the City of Novato Drainage Master Plan (Novato DMP); (2) calibrating the model for the ABSL Complex; and (3) evaluating flooding associated with design storm events and tide levels of interest. Use of the existing HEC-RAS model, instead of the ICM model, was considered for hydraulic modeling, as described in the last two paragraphs of this task. However, use of the existing ICM model allows for cost efficiencies and has been selected as the approach for this scope of work.

Refinements to the ICM model will include: updating hydraulic geometry of the ABSL Complex water bodies and the conveyances that enter and exit; and inputting appropriate design hyetographs. Based upon the review in Task 2, Wood Rodgers will determine, with District input, the appropriate design hyetograph(s) for the ABSL Complex and modify available hyetographs as needed. It is anticipated that the design hyetographs will be similar to those in the District HEC-HMS model or the Novato DMP ICM model. The ICM hydraulic model will be revised to provide a greater level of detail of geometry for the ABSL Complex water bodies and the conveyances that enter and exit each. Existing storm drains, bridges, culverts, weirs, and active creek channels will be modeled in one-dimension (1D), whereas ponds, basins, marsh, and floodplain will be modeled in two-dimensions (2D). The 1D features will reflect topographic survey data (e.g., spot elevations of inlets and outlets), collected in Task 3. The 2D features of the ABSL Complex will be added to the ICM hydraulic model by transferring digital terrain model surfaces from the District HEC-RAS geometry file, adding bathymetric survey data of Scottsdale Pond, and adding rough bathymetric survey of the Lynwood marsh area.

Wood Rodgers has already calibrated the Novato DMP ICM model for the City of Novato storm drain system, which is primarily north of the ABSL Complex. Wood Rodgers will further calibrate the ICM model for the ABSL Complex using water level data (Task 3.1) monitored during storm events. This effort includes downloading, quality checking, and inputting data to the model for calibration runs.

Wood Rodgers will simulate flood inundation area, water surface elevations, and depth averaged flow velocities, shear stresses, and directions for the 2-, 10-, and 50-year design storm events with a range of tides. Tide levels will include, but are not limited to, Mean Higher High Water and King Tides. As part of the existing condition H&H modeling, the appropriate combination of rainfall and tide conditions will be selected for use in the proposed condition analysis, as part of Task 5. Initial ground water levels in the model domain will be based on monitored dry weather water level data.

Wood Rodgers will perform a H&H evaluation specific for Nave Gardens to evaluate the relative contributions to flooding within the neighborhood due to: (1) backwater flooding from downstream (e.g., from Lower Novato Creek); (2) regional overflow flooding from upgradient (e.g., from Arroyo Avichi Creek, Warner Creek, upstream reaches of Novato Creek, or upgradient storm drains); and (3) local flooding from within the neighborhood. The Novato DMP evaluated trunk main lines, but not smaller storm drain pipes such as those within the three portions of Nave Gardens. This evaluation will add the smaller storm drain pipes in Nave Gardens to the H&H model, if necessary. It is assumed that additional surveying of the Nave Gardens localized pipe systems is not needed because the as-built data is readily available.

The existing conditions ICM model will provide a baseline to support the Task 5 assessment of alternatives. Particular attention will be made to the Arroyo Avichi Creek diversion structure because it is anticipated that improvement of the existing structure will be a relatively cost-efficient way to reduce flood risk. Model methodology and system performance will be documented in a Hydrologic and Hydraulic Modeling Technical Memorandum.

Building off the Novato DMP ICM model will be more efficient to update for this study than the District HEC-RAS model developed because:

• major storm drain pipes, culverts, and channels in the ABSL Complex are already modeled in ICM and not in HEC-RAS;

- catchment delineations are modeled with a higher resolution in ICM than the flow inputs modeled in the HEC-RAS model (reflective of the HEC-HMS model), which are too coarse to accurately reflect where runoff enters the ABSL Complex water bodies;
- the ICM H&H model was calibrated for northern areas of the Novato Creek watershed by Wood Rodgers as part of the Novato DMP, thus adding a level of confidence in the model;
- real-time controls for pump stations or proposed modulating valves can be modeled more readily and with greater flexibility in ICM than in HEC-RAS.

Wood Rodgers does acknowledge that the HEC-RAS model has certain benefits over ICM, and thus considered modeling the hydraulics of the ABSL Complex in HEC-RAS instead of ICM. One advantage of the HEC-RAS model is it includes two-dimensional surfaces of ponds and wetland, which are of greater detail than the one-dimensional storage nodes modeled in ICM. However, these 2D surfaces can be readily added to the ICM model from the HEC-RAS geometry file. Additionally, the HEC-RAS program is a non-proprietary software that is readily used by District staff, whereas ICM is proprietary and not commonly used by District staff.

Task 4 Deliverables:

- a. Hydrologic and Hydraulic Modeling Technical Memorandum
- b. Existing Condition Hydrology and Hydraulics Model

TASK 5 – ALTERNATIVES ANALYSIS

Following characterization of existing conditions, including H&H modeling, Wood Rodgers will develop and evaluate up to five preliminary improvement alternatives for each project area (ABSL Complex and Nave Gardens). Those preliminary alternatives will be shortlisted to the most feasible two or three alternatives based on anticipated flood reduction (simulated with the hydraulic model) and qualitative environmental permitting considerations. The final two or three alternatives will be evaluated in greater detail. The alternatives considered will reflect a spectrum of feasible solutions. One alternative may maximize flood conveyance but has higher costs and more environmental impacts. Another might be associated with lowest cost and lower environmental impacts. A third alternative might be a hybrid to avoid impacts to most sensitive areas while achieving flood conveyance in others. The exact development of alternatives will be submitted as a draft and iterated with District staff during the evaluation process.

Based on available flood maps, most of the opportunity for flood reduction occurs between the downstream side of the railroad tracks and the upstream side of Redwood Blvd. This is because there is significant head loss in extreme events between those two points. Since the Lynwood Basin is in the lower, more tidally influenced part of the project, improvements to Lynwood Basin will be included in combination with other elements.

Improvements included in the alternatives may include, but are not limited to: channel improvements; modifications to or additions of culverts (both in the channels and into/out of/within the open spaces); construction/improvement of levees (both along the channels and in the open spaces (above); levee lowerings or breaches into the open spaces; excavation and potentially fill in the open space; construction of pump stations (in the open spaces); abandonment of pump stations; Arroyo Avichi diversion improvements; adjustable weir boards / stop logs or actuated smart valves to allow for adaptive

management; relocation of the Lynwood Pump which requires costly upgrades (a focus area of this study); and management of erosion and sediment supply in Novato, Warner, and Arroyo Avichi Creeks.

The following lists examples of improvements that will be evaluated individually and then in combinations to develop alternatives to reduce flooding.

- 1. <u>Modification of Diversion Structure</u>. Adjustment of Arroyo Avichi diversion structure to increase diverted runoff toward the Baccaglio Basin and ABSL Complex, and away from the current primary flow path through Nave Gardens and Novato Creek.
- 2. <u>Modification to the Baccaglio Basin feeder channel.</u> Adjustment of the conveyance capacity (e.g., cross-sectional area) of the open channel to increase the amount of flow that can enter the Baccaglio Basin.
- 3. <u>Modifications of the Baccaglio Basin/Scottsdale Marsh.</u> Lowering the depth of the basins to increase flood volume stored. Options for removing the stored water using pump stations, etc. will be explored, including replacing the Baccaglio Basin outfall pipe with an open channel to increase capacity. Modification of basin outlets will be evaluated to optimize storage.
- 4. <u>Large Scale High Flow Diversion</u>. Diversion of runoff from Novato and/or Warner Creeks into the ABSL Complex via large storm drains in Novato Blvd to bypass flood prone portions of Novato Creek.
- 5. <u>Improvements to the Lynwood Basin</u>. Modification to Lynwood Basin would be evaluated in combination with other improvements. Previous studies considered altering a portion of Lynwood basin to provide storage for surface water flows only. This will be evaluated in combination with other alternatives including analysis of flooding levels to adjacent infrastructure (e.g., the SMART train and the Rowland Blvd offramp).
- 6. <u>Addition of Pump Stations.</u> Addition of pump stations for the purpose of flood control (as well as for storage discharge as discussed above). This could include a pump station in Novato Creek or moving the existing pump station at Lynwood Basin to Scottsdale Pond, which is a priority for the District.
- 7. <u>Nave Garden Improvements.</u> Improvements for consideration will include walls, diversions, valves, flow barriers, and new pump stations as a last resort (not preferred by the District). If regional overflow flooding from upgradient are the main source of flooding in Nave Gardens, then Wood Rodgers will provide conceptual alternatives but will not proceed to detailed alternative assessment as this requires more significant assessment of upstream area.

Other improvements will be developed based on review of previous reports and discussions with the District. After each is assessed individually, the improvements will then be combined into combinations to reflect "Alternatives".

The decision analysis for recommending a preferred alternative will rely on a risk-based approach commonly used to assist the process of engineering decision making. The process evaluates the consequences of each alternative in a quantitative way that considers the project objectives and the interests of the stakeholders. The process is meant to add structure and a basis for discussion to the decision making and consensus-building process. The methodology and results of the alternatives analysis will be documented in an Alternatives Analysis Technical Report. The report will include: a brief description of the project's setting; a 'mission statement' for the project with associated project objectives to be used as a basis for comparing and evaluating anticipated project success for each alternative;

identification of the project's stakeholders; description of design alternatives considered; summary of the evaluation methodology and results; and recommendation of a preferred alternative. Metrics of success to be evaluated for each of the final two or three alternatives may include, but are not limited to:

- flood risk (per FEMA HAZUS);
- life cycle cost (including design analysis, PS&E, permitting, capital, O&M, and monitoring costs);
- benefit-cost ratio;
- environmental permitting timeline; and
- utility and ROW constraints.

The existing condition ICM model, developed in Task 4, will be modified to reflect each of the final alternatives. Flood inundation area will be simulated for the appropriate combinations of design storm events and tide levels selected in Task 4. Flood risks will be based on a formal risk model that quantifies the Likelihood of Capacity Exceedance and the associated Consequences. Consequences associated with storm event flood inundation will be calculated based on anticipated property damages from the census data using the FEMA Hazus program.

Future site environmental monitoring and regulatory agency reporting costs will also be considered in evaluating the alternatives. It is assumed that District staff biologists and ecologists will provide guidance for evaluating environmental permitting timelines, monitoring costs, and regulatory agency reporting costs. It is anticipated that after a preferred alternative is selected, a more focused appraisal and quantitative assessment of the mitigation cost will be developed under future scopes.

Task 5 Deliverables:

- a. Alternatives Analysis Technical Memorandum
- b. Proposed Condition Hydrology and Hydraulics Models, associated with final alternatives

EXHIBIT A



OAKLAND FEE SCHEDULE Effective January 1, 2021

CLASSIFICATION	STANDARD RATE
Principal Engineer/Geologist/Surveyor/Planner/GIS/LA* II	\$280
Principal Engineer/Geologist/Surveyor/Planner/GIS/LA* I	\$245
Associate Engineer/Geologist/Surveyor/Planner/GIS/LA* III	\$235
Associate Engineer/Geologist/Surveyor/Planner/GIS/LA* II	\$225
Associate Engineer/Geologist/Surveyor/Planner/GIS/LA* I	\$215
Engineer/Geologist/Surveyor/Planner/GIS/LA* III	\$200
Engineer/Geologist/Surveyor/Planner/GIS/LA* II	\$190
Engineer/Geologist/Surveyor/Planner/GIS/LA* I	\$180
Assistant Engineer/Geologist/Surveyor/Planner/GIS/LA*	\$145
CAD Technician III	\$170
CAD Technician II	\$155
CAD Technician I	\$140
Project Coordinator	\$150
Administrative Assistant	\$130
1 Person Survey Crew	\$215
2 Person Survey Crew	\$315
3 Person Survey Crew	\$405
Consultants, Outside Services, Materials & Direct Charges	Cost Plus 10%
Overtime Work, Expert Witness Testimony and Preparation	Rate Plus 50%

*LA = Landscape Architect

Blueprints, reproductions, and outside graphic services will be charged at vendor invoice. Auto mileage will be charged at the IRS standard rate, currently 56.0 cents per mile.

Fee Schedule subject to change January 1, 2022.