Item No. 18
Town of Atherton

CITY COUNCIL STAFF REPORT – REGULAR AGENDA

TO: **HONORABLE MAYOR AND CITY COUNCIL**
GEORGE RODERICKS, CITY MANAGER

FROM: **MICHAEL KASHIWAGI**
COMMUNITY SERVICES DIRECTOR

DATE: **AUGUST 21, 2013**

SUBJECT: **DRAINAGE MASTER PLAN CONSULTANT AGREEMENT**

RECOMMENDATION

Authorize the City Manager to execute a fixed fee contract with NV5, Inc. in the amount of $49,505 to provide municipal engineering services for the Storm Drain Master Plan Update

BACKGROUND

The 2013-14 Capital Improvement Program (CIP) includes a Roadside Drainage Master Plan and Improvements project, budgeted at $100,000. The Master Plan will update the previous master plan completed in 2001. The primary issues to be addressed in the update of the Drainage Master Plan are to:

- identify locations where drainage structures are in need of repair or replacement;
- identify locations of localized ponding/flooding;
- map storage facilities constructed since 2001;
- propose improvements to alleviate localized ponding/flooding;
- propose improvements to implement requirements of the Regional Board permit; and
- prioritize proposed improvements and develop preliminary cost estimates.

FINDINGS

At the April 17, 2013 meeting, the City Council authorized the solicitation through a Request for Proposals (RFP) for the Storm Drainage Master Plan. The RFP was advertised on the Town's website, on additional industry sites and through direct solicitation of firms registered with the Town in order to solicit qualified consultants. Proposals were due on May 16, 2013, providing a 4 week response period.

Four proposals were received from the following firms:

- BKF Engineers
- Kimley Horn and Associates, Inc.
- NV5
- Schaaf & Wheeler

A selection panel consisting of Steve Tyler, Public Works Superintendent, David Huynh, Associate Civil Engineer and Gordon Siebert, City Engineer evaluated all proposals, ranked them according to the RFP's evaluation criteria and short-listed the three highest-scoring firms, Kimley Horn and Associates, Inc., NV5 and Schaaf & Wheeler to be interviewed. The firms were interviewed on July 18 and 23, 2013 by the above named people. Based upon their rankings and interviews, the panel unanimously selected NV5, as shown in the Selection Matrix (Attachment A). NV5 did an excellent job performing the previous Atherton Master Plan and they have worked on projects for Mountain View, San Jose, and Los Altos, among others.

Following the selection process, the Town began negotiations with NV5, based on their proposed scope of work. The scope includes updating map data, site analysis, identification of local and Town-wide deficiencies, and analysis of NPDES compliance, public input and preparation of the Master Plan, including a presentation to the City Council. The negotiated fee is $49,505, which is within the budgeted amount, and is incorporated into the Consultant Services Agreement (Attachment B). The consultant agreed to absorb materials costs within their fixed fee, at no additional cost.

FISCAL IMPACT

The 2013-14 Capital Improvement Program budget includes $100,000 from the Special Parcel Tax Fund for the Roadside Drainage Master Plan and future improvements.

Prepared By:

Michael Kashiwagi, P.E.
Community Services Director

Approved:

George Rodericks
City Manager

ATTACHMENTS:

1. Selection Matrix
2. Professional Services Agreement

ATTACHMENT A

SELECTION MATRIX

Criterion	Kimley-Horn	NV5	Schaaf & Wheeler
Project Understanding	13	14	12
Qualifications of Firm and Staff	28	32	29
Experience on Similar Projects	18	18	19
Project Delivery	20	20	20
References	10	10	10
TOTAL	89	94	90

CONSULTANT SERVICES AGREEMENT

THIS AGREEMENT is entered into as of the _____ day of _____, _____ by and between the TOWN OF ATHERTON ("Town") and NV5, Inc. ("Consultant").

RECITALS

WHEREAS, Town issued a Request for Proposals pursuant to City Council approval on April 17, 2013;

WHEREAS, Town received proposals from four civil engineering firms on May 16, 2013;

WHEREAS, Town desires to obtain civil engineering consulting services in connection with updating the Town's drainage master plan project, herein "Project";

WHEREAS, Consultant hereby warrants to Town that Consultant is skilled and able to provide such services described in this Agreement; and

WHEREAS, Town desires to retain Consultant in accordance with the terms of this Agreement to provide the services described herein.

AGREEMENT

NOW, THEREFORE, in consideration of their mutual covenants, the parties hereto agree as follows:

1. Incorporation of Recitals. The recitals set forth above, and all defined terms and terms and conditions set forth in such recitals and in the introductory paragraph preceding the recitals, are hereby incorporated into this Agreement as if set forth herein in full.

2. Project Coordination.

A. Town. The City Manager or his/her designee shall represent Town for all purposes under this Agreement. The City Manager or designee is hereby designated as the Project Manager. The Project Manager shall supervise the progress and execution of this Agreement.

B. Consultant. Consultant assigns David Richard_____ to have overall responsibility for the progress and execution of this Agreement.

3. Scope and Performance of Services

A. Scope of Services. Subject to such policy direction and approvals as Town through its staff may determine from time to time, Consultant shall perform the services outlined in the "Scope of Work" attached as Exhibit A ("Services"). Town shall have the right to amend the Scope of Work by written notification to Consultant. In such event, the compensation and time of performance shall be subject to renegotiation upon written demand of either party. Consultant shall not commence any work exceeding the Scope of Work without prior written authorization from Town. Failure of Consultant to secure Town's written authorization for extra or changed work shall constitute a waiver of

any and all right to adjustment in the contract price or time of performance, whether by way of restitution, quantum meruit, or any other form of monetary or nonmonetary compensation.

B. Time of Performance. The Services are to commence no sooner than August 22, 2013 and must be completed not later than June 30, 2014. Consultant shall perform the Services in accordance with the "Schedule of Performance" attached as Exhibit B. Any changes to the dates in either this Section or Exhibit B must be approved in writing by the Project Manager. Consultant shall not be responsible for delays caused by actions beyond their reasonable control.

C. Standard of Quality. Town relies upon the professional ability of Consultant as a material inducement to entering into this Agreement. All work performed by Consultant under this Agreement shall be in accordance with all applicable legal requirements and shall meet the standard of quality ordinarily to be expected of competent professionals in Consultant's field of expertise.

4. Compensation and Method of Payment.

A. Compensation. The compensation to be paid to Consultant, including payment for professional services and reimbursable expenses, shall be at the rate and schedule attached as Exhibit C, "Compensation." However, in no event shall the amount Town pays Consultant exceed **Forty Nine thousand Five hundred and Five** Dollars ($49,505) ("Cost Ceiling"). Payment by Town under this Agreement shall not be deemed a waiver of unsatisfactory work, even if such defects were known to Town at the time of payment.

B. Timing of Payment. Consultant shall submit itemized monthly statements for work performed. Town shall make payment, in full, within thirty (30) days after approval of the invoice by the Project Manager.

C. Changes in Compensation. Consultant shall not undertake any work that will incur costs in excess of the Cost Ceiling without prior written authorization by the Project Manager.

D. Taxes. Consultant shall pay all taxes, assessments and premiums under the federal Social Security Act, any applicable unemployment insurance contributions, Workers' Compensation insurance premiums, sales taxes, use taxes, personal property taxes, or other taxes or assessments now or hereafter in effect and payable by reason of or in connection with the Services to be performed by Consultant.

E. No Overtime or Premium Pay. Consultant shall receive no premium or enhanced pay for work normally understood as overtime, i.e., hours that exceed forty (40) hours per work week, or work performed during non-standard business hours, such as in the evenings, weekends, or on recognized holidays. Consultant shall not receive paid time off for days not worked, whether it be in the form of sick leave, administrative leave, or any other form of absence.

5. Term. This Agreement shall commence upon its execution and shall continue in full force and effect until completed, amended, or otherwise terminated as provided.

6. Inspection. Consultant shall furnish Town with every reasonable opportunity for Town to ascertain that the Services of Consultant are being performed in accordance with the requirements and intentions of this Agreement. All work done and all materials furnished, if any, shall be subject to the Project Manager's inspection and approval. The inspection of such work shall not relieve Consultant of any of its obligations to fulfill the Agreement as prescribed.

7. Ownership of Documents. Title to all plans, specifications, maps, estimates, reports, manuscripts, drawings, descriptions and other final work products compiled by Consultant under the Agreement shall be vested in Town, and none shall be used in any manner whatsoever, by any person, firm, corporation, or agency without the expressed written consent of Town. Basic survey notes and sketches, charts, computations, and other data prepared or obtained under the Agreement shall be made available, upon request, to Town without restriction or limitations on their use. Consultant may retain copies of the above-described information but agrees not to disclose or discuss any information gathered, discussed or generated in any way through this Agreement without the written permission of Town, unless required to do so by law. Consultant shall not be responsible for documents used beyond their original scope and intent, or by anyone other than Town.

8. Employment of Other Consultants, Specialists or Experts. Consultant will not employ or otherwise incur an obligation to pay other consultants, specialists, or experts for services in connection with this Agreement without the prior written approval of Town regardless of who pays for such services. All consultants, specialists, or experts approved by Town are listed in Exhibit D.

9. Conflict of Interest.

A. Consultant covenants and represents that neither it, nor any officer or principal of its firm, has, or shall acquire any investment, income, business entity, interest in real property, or other interest, directly or indirectly, which would conflict in any manner with the interests of Town or hinder Consultant's performance of the Services. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent, or subcontractor without the express written consent of Town. Consultant agrees at all times to avoid conflicts of interest, or the appearance of any conflicts of interest in the performance of the Agreement.

B. Consultant is not an employee of the Town in the performance of the services required by the Project.

10. Liability of Members of Town. No member of Town, including without limitation any officer, employee, or agent, shall be personally liable to Consultant in the event of any default or breach of Town, or for any amount that may become due to Consultant or any successor in interest, or for any obligations directly or indirectly incurred under the terms of this Agreement.

11. Indemnity. To the fullest extent permitted by law, Consultant hereby agrees to defend (by counsel reasonably satisfactory to the Town), indemnify, and hold harmless Town, its officers, agents, employees, volunteers, and servants, from and against any and all claims, demands, damages, costs, liabilities, or obligations brought on account of or arising out of any acts, errors, or omissions of Consultant, its officers, employees, agents, and subcontractors undertaken pursuant to this Agreement, excepting liabilities due to the sole negligence or willful misconduct of Town. Town has no liability or

responsibility for any accident, loss, or damage to any work performed under this Agreement whether prior to its completion and acceptance or otherwise. Consultant's duty to indemnify and hold harmless, as set forth herein, shall include the duty to defend as set forth in California Civil Code Section 2778. This indemnification obligation is not limited in any way by any limitation on the amount or type of damages or compensation payable by or for Consultant under Workers' Compensation, disability, or other employee benefit acts or the terms, applicability or limitations of any insurance held or provided by Consultant and shall continue to bind the parties after termination/completion of this Agreement.

12. Independent Contractor; Not an Agent of Town. It is expressly agreed that Consultant, in the performance of the Services agreed to be performed hereunder, shall act as and be an independent contractor and not an agent or employee of Town. As an independent contractor, Consultant shall obtain no rights to retirement benefits or other benefits that accrue to Town employees, and Consultant hereby expressly waives any claim it may have to any such rights. Further, Consultant, its officers, employees and agents shall not have any power to bind or commit Town to any decision.

13. Compliance with Laws.

A. General. Consultant shall use the standard of care in its profession to comply with all applicable federal, state, and local laws, codes, ordinances, and regulations. Consultant represents and warrants to Town that it has and shall, at its sole cost and expense, keep in effect or obtain at all times during the term of this Agreement any licenses, permits, insurance and approvals which are legally required for Consultant to practice its profession. Consultant shall maintain a Town business license.

B. Workers' Compensation. Consultant certifies that it is aware of the provisions of the California Labor Code that require every employee to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and Consultant certifies that it will comply with such provisions before commencing performance of the Agreement and at all times in the performance of the Agreement.

C. Town Not Responsible. Town is not responsible or liable for Consultant’s failure to comply with any and all of its requirements under this Section and any applicable Federal, State, or local laws or requirements.

D. Waiver of Subrogation. Consultant and Consultant's insurance company agree to waive all rights of subrogation against Town, its elected or appointed officials, officers, agents, employees, and volunteers for losses paid under Consultant's Workers' Compensation insurance policy that arise from the work performed by Consultant for Town.

14. Confidential Information. All data, documents, discussions or other information developed or received by or for Consultant in performance of this Agreement are confidential and not to be disclosed to any person except as authorized by Town or as required by law.

15. Assignment; Subcontractors; Employees.

A. Assignment. Consultant shall not assign, delegate, transfer, or convey its duties, responsibilities, or interests in this Agreement or any right, title, obligation, or interest in or to the same

or any part thereof without Town's prior written consent. Any assignment without such approval shall be void and, at Town's option, shall immediately cause this Agreement to terminate.

B. Subcontractors; Employees. Consultant shall be responsible for employing or engaging all persons necessary to perform the Services. No subcontractor of Consultant shall be recognized by Town as such; rather, all subcontractors are deemed to be employees of Consultant, and Consultant agrees to be responsible for their performance. Consultant shall give its personal attention to the fulfillment of the provisions of this Agreement by all of its employees and subcontractors, if any, and shall keep the work under its control. If any employee or subcontractor of Consultant fails or refuses to carry out the provisions of this Agreement or appears to be incompetent or to act in a disorderly or improper manner, it shall be discharged immediately from the work under this Agreement on demand of the Project Manager.

16. Insurance.

A. Minimum Scope of Insurance.

(1) Consultant agrees to have and maintain, for the duration of this Agreement, a General Liability insurance policy insuring it and its firm to an amount not less than $2,000,000 (Two Million Dollars) combined single limit per occurrence and in the aggregate for bodily injury, personal injury, and property damage.

(2) Consultant agrees to have and maintain, for the duration of this Agreement, an Automobile Liability insurance policy insuring it and its staff to an amount not less than $1,000,000 (One Million Dollars) combined single limit per accident for bodily injury and property damage.

(3) Consultant shall maintain professional errors and omissions liability insurance for protection against claims alleging negligent acts, errors, or omissions which may arise from Consultant's operations under this Agreement, whether such operations be by Consultant or by its employees. The amount of this insurance shall not be less than $1,000,000 (One Million Dollars) on a claims-made annual aggregate basis.

(4) A Workers' Compensation and Employers' Liability policy written in accordance with the laws of the State of California and providing coverage for any and all employees of Consultant:

(a) This policy shall provide coverage for Workers' Compensation (Coverage A).

(b) This policy shall provide required coverage for Employers' Liability (Coverage B).

(5) All of the following endorsements are required to be made a part of each of the required policies, except for the Professional Liability and Workers' Compensation and Employers' Liability policies, as stipulated below:

(a) "The Town of Atherton, its officials, officers, agents, employees, and volunteers are hereby added as additional insureds, but only as respect to work done by, for, or on behalf of the named insured."

(b) "This policy shall be considered primary insurance as respect to any other valid and collectible insurance Town may possess, including any self-insured retention Town may have, and any other insurance Town possesses shall be considered excess insurance only and shall not contribute to it."

(c) "This insurance shall act for each insured and additional insured as though a separate policy had been written for each. This, however, will not act to increase the limit of liability of the insuring company."

(6) Consultant shall provide to Town all certificates of insurance with original endorsements effecting coverage required by this section. Certificates of such insurance shall be filed with Town on or before commencement of performance of this Agreement. Town reserves the right to require complete, certified copies of all required insurance policies at any time.

(7) Any failure to comply with reporting provisions of the policies shall not affect coverage provided to Town, its officials, officers, agents, employees, and volunteers.

(8) 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.

B. All Coverages. Each insurance policy required shall provide that coverage shall not be canceled, except after 30-days' prior written notice by certified mail, return receipt requested, has been given to Town. Current certification of such insurance shall be kept on file with the City Manager at all times during the term of this Agreement.

C. Acceptability of Insurers. Insurance is to be placed with insurers with a Best's rating of no less than A:VII.

D. Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by Town. At Town's option, Consultant shall demonstrate financial capability for payment of such deductibles or self-insured retentions.

E. Verification of Coverage. Consultant shall furnish Town with original Certificate(s) of Insurance verifying Consultant's receipt of the insurance coverage required herein.

17. Termination of Agreement; Default.

A. This Agreement and all obligations hereunder may be terminated at any time, with or without cause, by Town upon 5-days' written notice to Consultant.

B. If Consultant fails to perform any of its obligations under this Agreement within the time and in the manner provided or otherwise violates any of the terms of this Agreement, in addition to all other remedies provided by law, Town may terminate this Agreement immediately upon written

notice. In such event, Consultant shall be entitled to receive as full payment for all Services satisfactorily rendered and expenses incurred hereunder, an amount which bears the same ratio to the total fees specified in the Agreement as the Services satisfactorily rendered by Consultant bear to the total Services otherwise required to be performed for such total fee; provided, however, that Town shall deduct from such amount the amount of damages, if any, sustained by Town by virtue of the breach of the Agreement by Consultant.

C. In the event this Agreement is terminated by Town without cause, Consultant shall be entitled to any compensation owing to it hereunder up to the time of such termination, it being understood that any payments are full compensation for services rendered before the time of payment.

D. Upon termination of this Agreement with or without cause, Consultant shall immediately turn over to the City Manager any and all copies of studies, sketches, drawings, computations, and other data, whether or not completed, prepared by Consultant or its subcontractors, or given to Consultant or its subcontractors, in connection with this Agreement. Such materials shall become the permanent property of Town. Consultant, however, shall not be liable for Town's use of incomplete materials or for Town's use of complete documents if used for services other than those contemplated by this Agreement.

18. Suspension. Town shall have the authority to suspend this Agreement and the Services, wholly or in part, for such period as it deems necessary due to unfavorable conditions or to the failure on the part of Consultant to perform any provision of this Agreement. Consultant will be paid for satisfactory Services performed through the date of temporary suspension.

19. Merger; Amendment. This Agreement constitutes the complete and exclusive statement of the agreement between Town and Consultant and shall supersede all prior negotiations, representations, or agreements, either written or oral. This document may be amended only by written instrument, signed by both Town and Consultant. All provisions of this Agreement are expressly made conditions.

20. Interpretation. This Agreement shall be interpreted as though it was a product of a joint drafting effort and no provisions shall be interpreted against a party on the ground that the party was solely or primarily responsible for drafting the language to be interpreted.

21. Litigation Support; Costs. If either party becomes involved in litigation arising out of this Agreement or the performance thereof, the court in such litigation shall award reasonable costs and expenses, including attorneys' fees, to the prevailing party. In awarding attorneys' fees, the court will not be bound by any court fee schedule, but shall, if it is in the interest of justice to do so, award the full amount of costs, expenses, and attorneys' fees paid or incurred in good faith. Consultant agrees to testify at Town's request if litigation is brought against Town in connection with Consultant's work product. Unless the action is brought by Consultant, brought by Town against Consultant, or is based upon Consultant's negligence, Town will compensate Consultant for the preparation and the testimony at Consultant's standard hourly rates.

22. Time of the Essence. Time is of the essence of this Agreement.

23. Written Notification. Any notice, demand, request, consent, approval or other communication that either party desires or is required to give to the other party shall be in writing and either served personally or sent by prepaid, first class mail. Any such notice, demand, etc. shall be addressed to the other party at the address set forth below. Either party may change its address by notifying the other party in writing of the change of address. Notice shall be deemed communicated within 72 hours from the time of mailing if mailed as provided in this section.

If to Town:
City Clerk
Town of Atherton - Town Hall
91 Ashfield Road
Atherton, CA 94027

If to Consultant:
David Richard
NV5
2025 Gateway Place, Suite 156
San Jose, CA 95110

24. Consultant's Books and Records.

A. Consultant shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to either charges for services, expenditures, and/or disbursements charged to Town for a minimum period of three (3) years, or for any longer period required by law, from the date of termination or completion of this Agreement.

B. Any records or documents required to be maintained pursuant to this Agreement shall be made available for inspection or audit, at any time during regular business hours, upon written request by the City Attorney, City Finance Director, City Manager, or a designated representative of any of these officers. Copies of such documents shall be provided to Town for inspection when it is practical to do so. Otherwise, unless an alternative is mutually agreed upon, the records shall be available at Consultant's address indicated for receipt of notices in this Agreement.

C. Town may, by written request by any of the above-named officers, require that custody of the records be given to Town and that the records and documents be maintained in the City Manager's office.

25. Agreement Binding. The terms, covenants, and conditions of this Agreement shall apply to, and shall bind, the heirs, successors, executors, administrators, assigns, and subcontractors of both parties.

26. Equal Employment Opportunity. Consultant is an equal opportunity employer and agrees to comply with all applicable state and federal regulations governing equal employment opportunity. Consultant will not discriminate against any employee or applicant for employment because of race, age, sex, creed, color, sexual orientation, marital status or national origin. Consultant will take affirmative action to ensure that applicants are treated during such employment without regard to race, age, sex, creed, color, sexual orientation, marital status, or national origin. Such action shall include, but shall not

be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; lay-offs or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Consultant further agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

27. Town Not Obligated to Third Parties. Town shall not be obligated or liable for payment hereunder to any party other than the Consultant.

28. 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 either party may have hereunder.

29. Severability. If any one or more of the provisions contained herein shall for any reason be held to be invalid, illegal or unenforceable in any respect, then such provision or provisions shall be deemed severable from the remaining provisions hereof, and such invalidity, illegality, or unenforceability shall not affect any other provision hereof, and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had not been contained herein.

30. Exhibits. The following exhibits are attached to this Agreement and incorporated herein by this reference:

A. Exhibit A: Scope of Work

B. Exhibit B: Schedule of Performance

C. Exhibit C: Compensation

D. Exhibit D: Consultants, Specialists, or Experts

31. Execution. This Agreement may be executed in several counterparts, each of which shall constitute one and the same instrument and shall become binding upon the parties when at least one copy hereof shall have been signed by both parties hereto. In approving this Agreement, it shall not be necessary to produce or account for more than one such counterpart.

32. News Releases/Interviews. All Consultant and subconsultant news releases, media interviews, testimony at hearings and public comment shall be prohibited unless expressly authorized by Town.

33. Applicable Law; Venue. This Agreement shall be construed and interpreted according to California law. In the event that suit is brought by either party, the parties agree that trial of such action shall be held exclusively in a state court in the County of San Mateo, California.

34. Authority. Each individual executing this Agreement on behalf of one of the parties represents that he or she is duly authorized to sign and deliver the Agreement on behalf of such party and that this Agreement is binding on such party in accordance with its terms.

IN WITNESS WHEREOF, Town and Consultant have executed this Agreement as of the date first above written.

TOWN OF ATHERTON

By: _____
City Manager

Date:

APPROVED AS TO FORM:

By: _____
City Attorney

ATTEST:

By: _____
City Clerk

CONSULTANT
(CORPORATIONS REQUIRE (2) SIGNATURES

By: _____
Title: _____

Date:

By:_____
Title:_____

Date:

EXHIBIT A

SCOPE OF WORK

– See attached proposal

Task 1 Update Existing Drainage Inventory and Baseline Information

Task 2 Refine Drainage Areas

Task 3 Calculate Design Flows

Task 4 Update Townwide Drainage System Deficiency Map

Task 5 Develop Prioritized Improvement Projects with Costs

Task 6 Stormwater Management Areas and Recommendations for NPDES C3 Requirements Compliance

Task 7 Public Consultation and Report Preparation

EXHIBIT B

PROJECT SCHEDULE

Task	Duration	Start	Finish
1. Update Inventory	6 wks	9/3/13	10/11/13
2. Refine Drainage Areas	3 wks	10/14/13	11/1/13
3. Calculate Design Flows	4 wks	11/4/13	11/29/13
4. Update Deficiency Maps	4 wks	12/2/13	1/3/14
5. Develop Projects and Costs	6 wks	1/6/14	2/14/14
6. Stormwater Management Recommendations	4 wks	2/17/14	2/28/14
7. Consultation and Report	6 wks	3/3/14	4/11/14

EXHIBIT C

COMPENSATION

Task 1 - $10,680

Task 2 - $ 4,840

Task 3 - $10,420

Task 4 - $ 5,340

Task 5 - $ 7,360

Task 6 - $ 2,540

Task 7 - $ 8,325

TOTAL **$49,505**

EXHIBIT D

CONSULTANTS

Principal – David Richard, PE

Project Manager – Wen Chen, PhD, PE

Peer Review – Scott Lyle, PE

Project Engineer – Nona Espinosa, PE

Support Staff – Rachel Bejerano, PE

Support Staff – Jill Sylvester, PE

NV5

BEYOND ENGINEERING

May 16, 2013

Theresa DellaSanta | City Clerk
Town of Atherton
91 Ashfield Road
Atherton, CA 94027

Subject: **Proposal to Provide Municipal Engineering Services for Storm Drainage Study Updates and Related Services**

Dear Ms. DellaSanta:

We understand the issues and know what has to be updated.

In 2001, Nolte Associates, Inc. (now a subsidiary of NV5, Inc.) prepared the initial drainage study for the Town of Atherton. To complete the storm drainage maps, Nolte completed field measurements, prepared records, and evaluated 512 drainage structures. Once the structures had been identified, hydraulic analyses were performed based on flow determined from hydrologic calculations. That vital information was transferred into the Town's GIS database system; it allowed the Town to conduct future hydraulic modeling and anticipate upcoming maintenance needs. Problem areas were also identified and catalogued based on modeling calculations and input from the community. Nolte recommended solutions, developed cost estimates, and assigned priorities for needed construction projects. Key project highlights included hydrologic analyses, overland flow hydraulics, digital map preparation, project cost estimating and graphic presentation of results: some of which are included for your review.

Nona Espinosa, our project engineer, was a key contributor to that 2001 study that served as a blueprint for drainage infrastructure. Recently she re-visited various project sites in the Town, taking note of changed conditions and potential areas of concern. Nona's photos from that visit are included in our proposal. She has also reviewed our in-house CAD files and calculations from that 2001 study. She is familiar with the Town's system, and prepared to assist the team with the following key issues to be addressed in the updated storm drainage study:

- Updating the drainage system inventory and baseline information.
- Assessing the weaknesses of the system, using input from the community.
- Developing a prioritized plan for improvements to the drainage system, with itemized cost estimates.
- Evaluating stormwater management areas and proposing recommendations in compliance with the NPDES C.3 requirements.

Since that drainage study in 2001, compliance standards have changed (NPDES), and the Town adopted Drainage Criteria in 2013—both also need to be considered in the updated study.

Interestingly, since that drainage study in 2001, the Town's actual demographics have not changed significantly. For example, the total population has actually decreased (from 2001 to 2011) according to available census data. However, to maximize efficiency, it will be important to quickly determine what has changed physically, including increased upstream flows and residential development in the area. It will also be critical to determine exactly where that development has taken place.

We offer the best value.

To put it bluntly, because of our past history with the Town, there will not be a long learning curve for the Nolte team. We have the key staff, the data, similar local experience, and the horsepower to get the job done. We also understand how to control the "quality and completeness" of our work.

We invite you to review the relevant project experience in our proposal, including the master drainage studies we completed for nearby Stanford University and Mountain View. Both were delivered on time and within budget.

Please feel free to contact me at 209.824.3203 or Wen Chen at 925.279.4424 should you have any questions concerning our proposal, need additional information, or wish to schedule an interview. We look forward to, once again, working with the Town of Atherton.

Sincerely,
Nolte Associates, Inc. (a subsidiary of NV5, Inc.)

Dave Richard, PE
Principal in Charge

Wen Chen, PhD, PE, CFM, QSD/P
Project Manager

Contents

Firm Introduction

Firm Overview and History

We are NV5, a blend of established engineering companies with a similar business philosophy: **To go beyond engineering.** What makes NV5 unique and sets it apart from other engineering companies is the way our people go beyond engineering, every day for every client. Beyond engineering describes not only the variety and scope of the services we provide, but also the relationships we establish with our clients, our commitment to sustainability, and our involvement in the communities we live and work in.

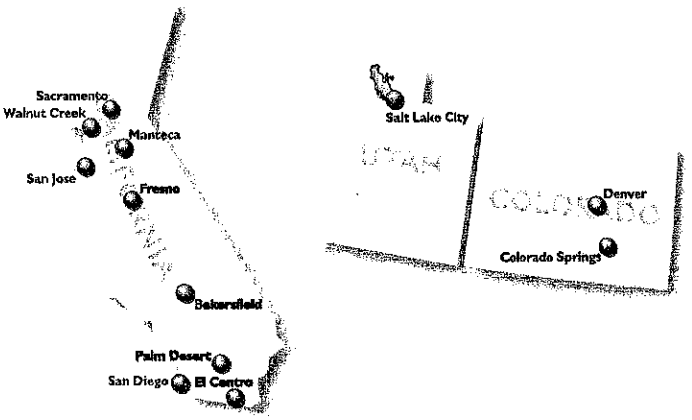
NV5 provides the expertise to plan, design, and build the infrastructure that links our communities together. We talk with our public and private sector clients and, more importantly, we listen. Our clients trust us to provide integrated engineering, consulting, and management solutions—regardless of project size or complexity—and we believe that sustainable design principles are a necessity, not a luxury.

NV5 clients include federal, state, municipal and local governments, as well as private property owners and quasi-public agencies in the fields of education, healthcare, energy, and utilities.

At NV5, we are passionate about what we do. Whether it is **water resources, flood control, wastewater engineering, transportation, surveying and mapping, structural engineering, GIS, land development, program or construction management, energy services, permitting, funding assistance, geotechnical consulting, or construction quality assurance**, our employees bring a vast amount of experience, commitment, and enthusiasm to each new project.

Formed in 2010, NV5 is comprised of companies, like Nolte Associates, Inc., with established histories. We understand that when a company starts out right it has the ability to evolve in the years ahead. That past allows us to anticipate future changes that may impact our clients and expand our capabilities to deliver sustainable solutions.

Nolte Associates, Inc. (a California corporation) began in 1949 as a one-man surveying firm in downtown Palo Alto. Originally located in tight quarters above a JC Penney department store, Nolte expanded its offices to cover not only California, but Colorado and Utah as well. Over six decades later, Nolte has evolved into a respected full-service consulting engineering firm with 300 employees.



NV5

Legal Name

Nolte Associates, Inc. is a subsidiary of NV5, Inc.

Principal Office (National Headquarters)

- NV5, Inc.
  200 South Park Road, Suite 350
  Hollywood, FL 33021
  Phone: 954.495.2112 | Fax: 954.495.2101

Local Office

- 2025 Gateway Place, Suite 156
  San Jose, CA 95110
  Phone: 408.392.7200 | Fax: 408.392.0101

Additional Locations

- 201 N. Civic Drive, Suite 255
  Walnut Creek, CA 94596
  Phone: 925.934.8060 | Fax: 925.939.5451
- 2495 Natomas Park Drive, 4th Floor
  Sacramento, CA 95833
  Phone: 916.641.9100 | Fax: 916.641.9222
- 15070 Avenue of Science, Suite 100
  San Diego, CA 92128
  Phone: 858.385.0500 | Fax: 858.385.0400

Year Established

Nolte Associates, Inc. was established in 1949.

Type of Organization

Nolte Associates, Inc. is a corporation wholly owned by NV5, Inc.

Project Contact

- Wen Chen | Project Manager | NV5, Inc.
  201 N. Civic Drive, Suite 255
  Walnut Creek, CA 94596
  Phone: 925.279.4424 | Cell: 510.688.8064
  Fax: 925.939.5451
  Email: Wen.Chen@NV5.com

Key Services

- Flood Control and Drainage
- Water Supply, Distribution, and Treatment
- Wastewater Engineering
- Water Recycling
- Geographic Information Systems (GIS)
- Traffic and Transportation Design - Streets, Roadways, Highways, Rail, and Transit
- Structural/Bridge Engineering
- Program Management
- Construction Management
- Surveying and Mapping - ALTA, Boundary, GPS, Topographic, Construction Staking
- Right-of-Way Engineering
- Special Services - Public Outreach/ Consensus Building, Expert Witness, Constructability and Sustainability Reviews

Approach

Objectives and Key Issues

Nolte conducted Atherton's town-wide drainage study in 2001. Since then, the Town has completed a number of projects to mitigate drainage impacts specifically identified in the study. However, there is now a need to update the study as:

- Over the past decade, residential development may have altered drainage patterns previously identified in the study, potentially exacerbating existing drainage system weaknesses.
- Drainage improvements are now required to comply with NPDES water quality requirements (C.3 requirements) as detailed in the 2009 Municipal Regional Stormwater Permit, as well as with the Town's 2013 Drainage Design Criteria.

From discussions at the pre-proposal meeting on April 25, 2013 and our own research, we understand that the overall framework, methodologies, and processes developed for the 2001 Study remain valid but need updating. The update will focus on four key issues:

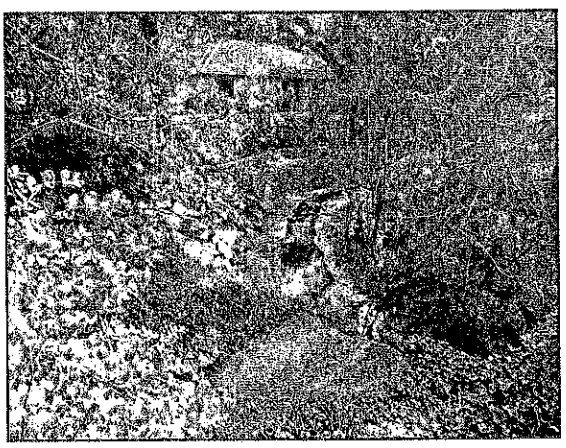
- **Updating the drainage system inventory and baseline information.**
- **Assessing the weaknesses of the system, using input from the community.**
- **Developing a prioritized plan for improvements to the drainage system, with itemized cost estimates.**
- **Evaluating stormwater management areas and proposing recommendations in compliance with the NPDES C.3 requirements.**

The following sections describe our approach to these key issues and to project management in general. To address these key issues, we have divided the required work into a logical sequence of tasks presented later in this proposal in the Work Plan section.

Approach to Key Issues

Key Issue I: Updating the drainage system inventory and baseline information.

The 2001 study inventoried 512 drainage features on a base map accessible through GIS. We will maintain the same database format and will update the base map with drainage improvements constructed since 2001. This update will be based on as-built plans, records, and recent studies from San Mateo County and other public entities. To be consistent with the existing database, we will conduct field verification of drainage features constructed since 2001, including their location, size, construction material, invert elevations, and existing condition.



Atherton Channel at Broadacres near Walsh Road

Key Issue 2: Assessing the weaknesses of the system, using input from the community.

In the 2001 study, 97 flood-prone locations were identified and recorded in the Reported Flooding maps. Our weakness assessment will be based upon:

- Community flood records
- Computed system deficiency based on hydrology/ hydraulic analyses.

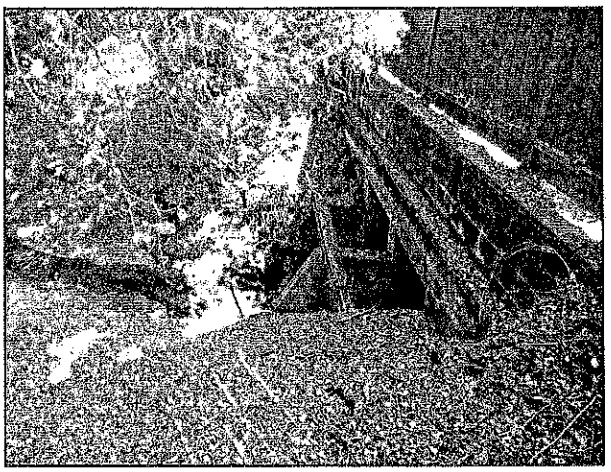
To update areas of weakness, we will refine and adjust sub-basin boundaries due to recent development; update the hydrology calculations based on the 2013 Town of Atherton Drainage Criteria, including rainfall values, runoff coefficients, and routing paths if already altered, and determine discharge rates at major sub-basin outlets. Hydraulic models will be updated where drainage systems have been modified to establish inundation limits. The inundation locations will be field-verified and validated with input from the community. We will use the rational method for the hydrology update, and the Bentley Haestad StormCAD, FlowMaster, CulvertMaster, and HEC-RAS programs for storm drain, culvert, and open channel hydraulic analyses.

Key Issue 3: Developing a prioritized plan for improvements to the drainage system, with itemized cost estimates.

In the 2001 study, the Town was divided into four major drainage basins and 68 sub-basins. The storm flows were calculated for 10-year, 25-year, and 100-year rainfall events. The 10-year flows were compared with the available capacity in collector pipes and ditches. The 25-year flows were compared with the available capacity in major interceptor pipes and channels, while the 100-year flows were compared with the available capacity in Atherton Channel. Based on these calculations, under-capacity components in the drainage system were identified and seven priority levels/categories were proposed to improve the drainage system. These priority levels were based on public health and safety needs anticipated for the upcoming decade.

We will re-evaluate the under-capacity components based on updated analyses, and will develop a list of improvements within the seven prioritized categories developed in the 2001 study. Cost estimates for each recommended improvement will be updated to a 2013 cost baseline.

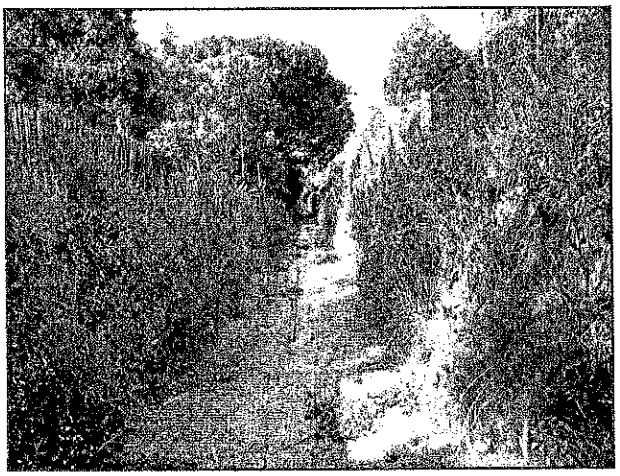
Atherton Channel at Broadacres near Walsh Road



Atherton Channel at Alameda de las Pulgas and Walsh Road

Key Issue 4: Evaluating stormwater management areas and proposing recommendations in compliance with the NPDES C.3 requirements.

Stormwater management areas using swales and berms to retain runoff were identified in Priority #7 of the 2001 study's Prioritized Plan. We will update these management areas based on the weaknesses re-evaluation and the 2013 Drainage Design Criteria. The Town has enacted a requirement that new development provide detention volume for flow increases caused by that proposed development from a 2-inch, 24-hour storm event. The San Mateo County Water Pollution Prevention Program (STOPPP) further requires stormwater treatment prior to discharge to the drainage system. We will evaluate existing onsite detention basins and propose simple modifications to ensure that they are in compliance with water quality requirements. Such modifications may include bio-swale dredging to increase capacity, re-vegetation, overflow control, and bio-infiltration.



Atherton Channel along Marsh Road near Fair Oaks Avenue

Project Management Practices, Methodologies and Processes

Our primary objective, no matter what the scale or type of project, is to consistently provide timely and cost-effective engineering services and work products that meet our clients' needs and goals. **We will ensure that work products meet the required quality and are delivered on time and within the agreed budget.** To explain how we do this, we have detailed below our general project management practices, methodologies and processes that ensure that we can meet requirements relating to schedule, budget and can assure the requisite quality.

To achieve schedule, quality and budget goals, we believe strongly in the inherently-simple, two-stage project management philosophy of **Planning the Work** and then **Working the Plan**. Within this overall philosophy, our typical plan and approach are as follows:

We practice an attention-to-detail approach when establishing a Project Work Plan (PWP) at the start of a project. The PWP is a guide to all the project participants and is the key project planning document. It includes all project participant contact information, the project organization structure and lines of communication, the electronic and paper filing system to be used, contract documentation and the detailed scope of services, project schedule and all the project protocols to be followed. Establishing the PWP quickly allows us to identify the key tasks, milestones and deliverables early. In fact, much of this planning usually takes place at the proposal stage prior to project award. This **early attention-to-detail** approach ensures we allocate the right people and resources efficiently to meet our clients' needs and goals, and that we produce work product to the requisite quality, on time and within budget. We ensure that the project schedule in the PWP is a logical sequence of inter-related tasks on a realistic timescale. Each PWP is subject to review and approval by senior managers experienced in the type of work being undertaken before it is finalized and

circulated to the project participants. Our PWPs and associated project schedules include adequate time for internal work product review and checking before issue to the client.

We actively engage our clients early in the project planning process so their input is included in the PWP. This very important activity ensures that the client's, our, and our subconsultant's staff are all working to the same goals, on the same schedule. We make sure that we determine the client's time requirements for submittal review so that allowance is made in the PWP and in the project schedule.

We schedule regular monthly progress meetings to review project progress and to discuss and resolve project issues. These can be combined with study/design review meetings to promote efficiency, and can alternate between in-person meetings and conference calls to suit. A running Action Items list is usually employed as part of these meetings to ensure key issues are addressed by those responsible, and in a timely manner, so as not to inhibit project progress.

We schedule key study/design review meetings and workshops to discuss our client's comments on submittals and draft reports. Getting everyone in the same room, or together on a conference call, is an efficient and timely way to discuss comments and review project issues. It allows both client and consultant staff to buy-in and to confidently proceed on to the next tasks. On some complex projects, we also include for informal client review meetings inbetween formal submittals (called over-the-shoulder reviews) to confirm a particular approach or for timely resolution of an important issue. We also pro-actively utilize the project kick-off meeting to obtain client project records and reports.

Efficient internal and external communications are key to project success. We ensure that clear communication lines within and between our project team and the client's team are established and maintained. Our philosophy is to over-communicate rather than under-communicate within a project matrix. We encourage direct communication across client, consultant and subconsultant teams, with key leaders and managers cc-ed on e-mails to ensure they stay in the loop. **Creating strong relationships between people on a project is key to its success.**

In Working the Plan, at the very start of a project **we clearly communicate to each NV5 team member and subconsultant the scope of their work, the content and quality required, the number of labor hours they have to produce their deliverables, and their schedule deadlines.** Once this is communicated and work has commenced, our project managers and team leaders stay in regular contact with those carrying out the work: checking on progress against hours expended. This approach ensures the project stays on track and to budget, and ensures that any problems or potential delays are identified early and dealt with before they have the chance to become bigger issues.

Our project managers in particular, but all our team members, are always responsive. This means responding as soon as possible to a client's phone call, voice mail or e-mail: with a maximum allowable delay of 24 hours.

In Working the Plan, our project team members are pro-active, flexible and able to promptly respond to changes in circumstances. While our managerial efforts are focused on adhering to our PWP and schedule, we recognize that unforeseen circumstances often impact project implementation, at no fault of the client or the consultant. **Our project managers are proactive realists**: looking for, and anticipating the likely impact of unforeseen changes. We recognize the importance of communicating early any issues that could impact project schedule to our clients, and in working with our clients to agree how to address these issues. **A flexible and prompt response to unforeseen change is another key to project success.**

Our project organization structure always provides clients with direct access to a Principal in Charge (PIC). We encourage our clients to bring any concerns about project management, progress and/

or performance to a dedicated PIC. He or she will promptly address these concerns, and has the authority to allocate additional resources if these are needed.

We report on progress regularly, clearly and in detail. We typically include with our monthly invoices a monthly progress report that shows work carried out and completed: both overall and in the previous month. We also summarize, often in graphical form, actual fee expenditure against that projected, and actual progress against the PWP. We also include advance notice of upcoming project tasks and activities.

We implement and maintain a Project Quality Assurance Plan, as detailed below.

Quality Assurance and Quality Control

NV5 establishes a Project Quality Assurance (QA) Plan for a project as part of the PWP. We require QA procedures to be in place on every project to demonstrate to our clients that we are checking that Quality Control procedures are being followed. This is the fundamental difference between the terms *Quality Assurance* and *Quality Control*: we use Quality Assurance to assure our clients that we are actually doing what we say we are doing when it comes to independent checking and peer review of project submittals and deliverables. It is a process of verification.

Each project deliverable is reviewed and checked by a senior professional experienced in the type of work before it is sent to our clients for their review. Our project managers are held responsible for maintaining each QA Plan and for scheduling and completing each submittal QA review. With every submittal, we require the independent peer reviewer to sign a standard form to confirm that they have carried out the QC review. The Project Manager then signs the form to confirm receipt of comments from the peer reviewer and to confirm that agreed modifications to the submittal have been incorporated prior to it being released to the client. As verification, the PIC is then required to review that this procedure has been followed for each submittal and to sign-off as the final signature on the standard form. The completed standard form is kept on file with the project quality files for future reference in case of an internal quality audit or one carried out by our clients. Often we submit the fully-signed form with our submittals to demonstrate and verify to our clients compliance with our QA/QC procedures.

The Role of the Client in Project Delivery

Within the above managerial approach, we see the key role of our client as one of an active, engaged and integrated team member, providing consistent guidance and direction to the project team. We look to the client to provide key project records such as 'as-built' record drawings and previous reports at the kick-off meeting, to provide thorough reviews of project submittals, on schedule, at points of both formal and informal design review, and to respond quickly to any subsequent requests for information, or requests for a decision.

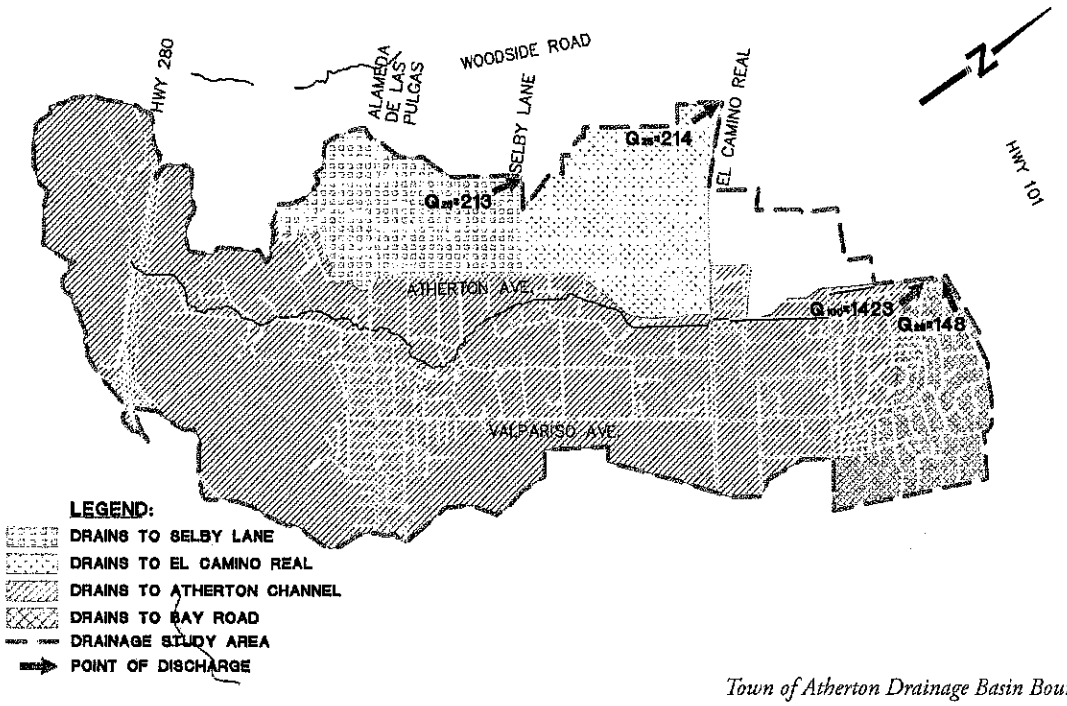
Project Experience and Graphics

To illustrate our expertise and capacity to complete community-wide drainage studies, summarized below are brief descriptions of previous projects. Key project experiences are highlighted along with similarities to the proposed work. Client contacts are furnished and study graphics are included for reference.

Town of Atherton Drainage Study

- **Client Contact:** Gordon Siebert | Director of Public Works | 650.752.0532

Nolte completed the field measurements, documented condition, and evaluated 512 drainage structures as part of the preparation of storm drainage maps. The storm drainage information was input into AutoCAD where it was used in the Town's GIS database system. Once structures were identified, hydraulic analyses were performed based on flow determined from hydrologic calculations. Problem areas were identified and catalogued considering desktop evaluations and anecdotal information from local residents. Solutions were recommended and construction cost estimates and priorities were assigned for the construction of the recommended work.



Town of Atherton Drainage Basin Boundaries

Key Project Highlights

- Hydrologic Analyses
- Overland Flow Hydraulics
- Digital Map Preparation
- Project Cost Estimating
- Graphic Presentation of Results

Benefits

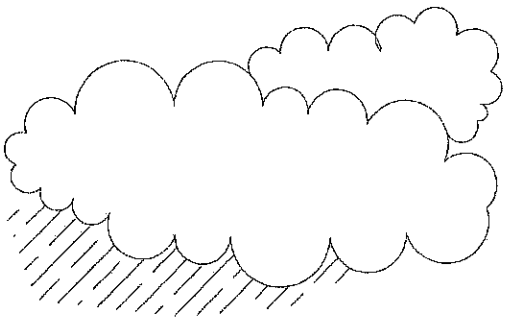
- Flood Flow Path Delineation
- Flood Protection Facilities Location
- Increased Awareness of Flood Protection

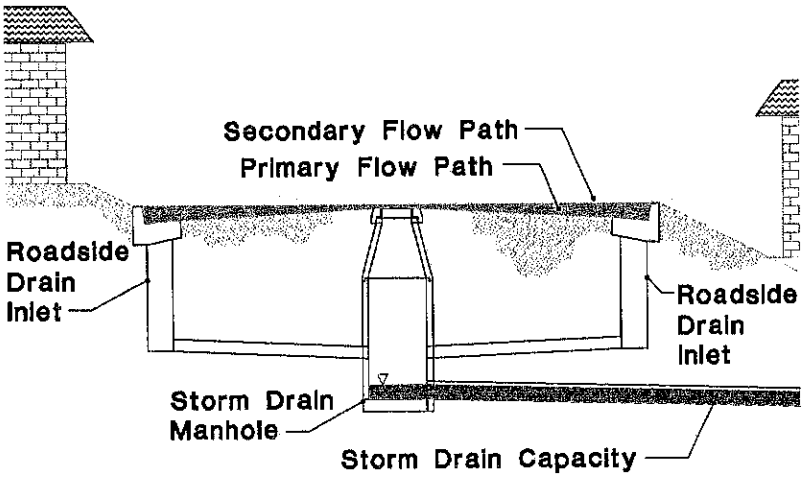
Similarities to Proposed Work

- Assessment of Drainage Facilities
- Prioritization of Recommended Improvements
- Calibration of Models with Local Input

Stanford University East Campus Drainage Study

- **Client Contact:** Tom Zigterman | Water and Infrastructure Manager | 650.725.3400





EXISTING CONDITION

When runoff exceeds storm drain capacity, the overflow fills curb areas first (primary path), and then tends to flood adjacent properties (secondary path)

After the flooding (in some cases severe) of the Stanford University campus in February 1998, NV5 was selected to provide a Drainage Master Plan for the east side of the campus and recommend design improvements. The study included the core of the campus and adjacent lands draining into the area. NV5's study primarily addressed surface flow conditions, which occur when storm drain capacity is not available or exceeded.

Our first order of work was to establish the design criteria and standards. These standards were used to evaluate both the condition and performance of existing systems. This included a review of existing design criteria in the area, in light of standards applicable to surrounding communities. A review was made of drainage/flooding complaints and records, and a field inventory was performed to verify existing conditions and potential flaws in the system. An aerial survey was flown to prepare a topographic map. The ability to accurately calculate flood elevations and perform flood routing was dependent on the accuracy and quality of this core data. During the course of the project, 179 drainage areas were defined and flows were calculated for 66 different flow paths. Ultimately 33 of the paths were analyzed using HEC-RAS, and 20 of the paths were included in the Master Plan. The extensive analytical load for this project required maximizing the use of Softdesk, HEC-RAS, and BOSS-RMS to optimize the capacity of the computer in preparing the data for the hydraulic analysis, and presenting the results graphically on the base maps including limits of likely inundation.

The data gathered was summarized in a report that included a description of work performed, a summary of findings, project cost estimates, and priorities for construction of the recommended work. Improvements worth approximately $6 million were recommended.

The critical nature of the projects and the risk presented to campus facilities mandated that design and construction occur concurrently with the completion of the study. During the first year, approximately $1.5 million worth of critical improvements were designed and constructed. The designs not only provided essential flood protection, but also met ADA requirements and upheld Stanford's rigorous aesthetic standards. Because all the building entrances were at grade, all designs flowed away from buildings.

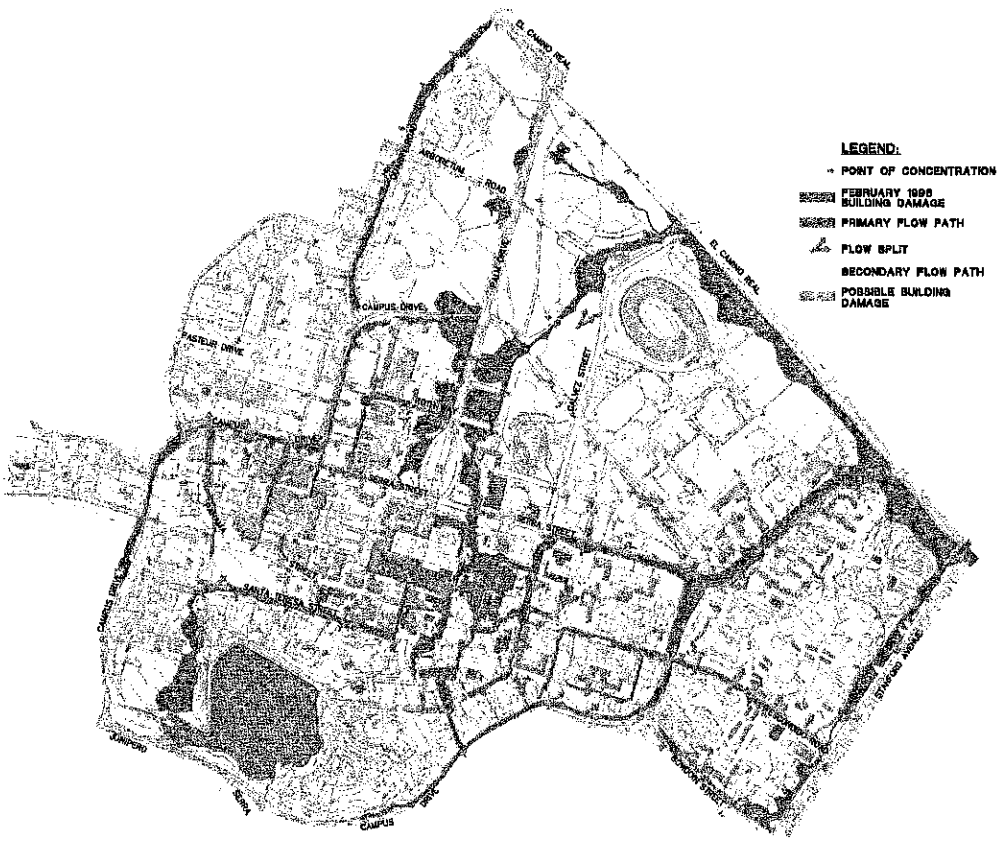
N|V|5

Stanford University West Campus Drainage Study

- **Client Contact:** Tom Zigterman | Water and Infrastructure Manager | 650.725.3400

The West Campus Drainage Study was the continuation of the East Campus Study and provided a completed drainage plan for the entire academic core area. Our job was to develop a plan for managing stormwater flows from the campus and the foothills in a way that would protect the campus facilities from flooding, but not increase the risk of damage to the surrounding community. The project specifically considered the interaction of the storm drainage system and the overland flow routes. Approximately 94 drainage areas were delineated and calculated. A total of 10 flow paths were defined to transport the flow. These flow paths were specifically paired with the East Campus drainage features to develop inundation areas.

The size of the existing pipe drainage system was considered to be significant and areas were selectively prioritized to enter the pipe system. This prioritization allowed the system to provide a higher level of protection than would otherwise be achieved.



Reported flooding and modeled inundation limits

Similar to the East Campus Study, the project included comprehensive and accurate aerial mapping and extensive modeling of surface flow conditions using Softdesk, HEC-RAS, and BOSS-RMS. The results of both studies were presented in color graphics to facilitate ease of understanding and the usefulness of the end products. A major objective of the West Campus Study was to foster awareness of the need to provide flood protection and incorporate flood protection planning into the facilities planning process.

The planning process was complicated by the need to achieve protection of primary campus facilities in as short a time frame as possible. To accommodate this, design and construction of critical elements proceeded concurrently with the planning effort. Concepts developed included additions to existing walls, speed bumps, earth berms and regrading to develop swales. The challenging part of the implementation and design effort was to reconcile a relatively simple concept with the needs of a very active campus. ADA compliance, pedestrian and bicycle movements, and aesthetics all became significant and had to be integrated in a way that did not compromise the overriding concern for the watertight integrity of the system.

Some improvements were obvious (pipes were installed through the arcade) and some much more subtle (concrete mow strips next to vegetation). Other solutions included regrading an intersection to change from a crown-to-crown match to a valley gutter with a ridge, which provided substantial flow capacity through the intersection and a high level of protection from the water that formerly turned the corner.

Our drainage study and design work for Stanford University has continued since 1998, and we are currently working on the 2035 future expansion drainage master plan for the campus. We have consistently delivered quality and complete work for the university on time and within budget. This has resulted in re-appointment for many follow-on assignments over the last 15 years.

Key Project Highlights

- Hydrologic Analyses
- Overland Flow Hydraulics
- Detention Pond Planning
- Digital Map Preparation
- Project Cost Estimating
- Graphic Presentation of Results

Benefits

- Flood Flow Path Delineation
- Flood Protection Facilities Location
- Increased Awareness of Flood Protection

Similarities to Proposed Work

- Detailed Hydrologic/ Hydraulic Analyses
- Integration of Surface and Underground Drainage Improvements
- Sensitivity to Aesthetics, Public Movement

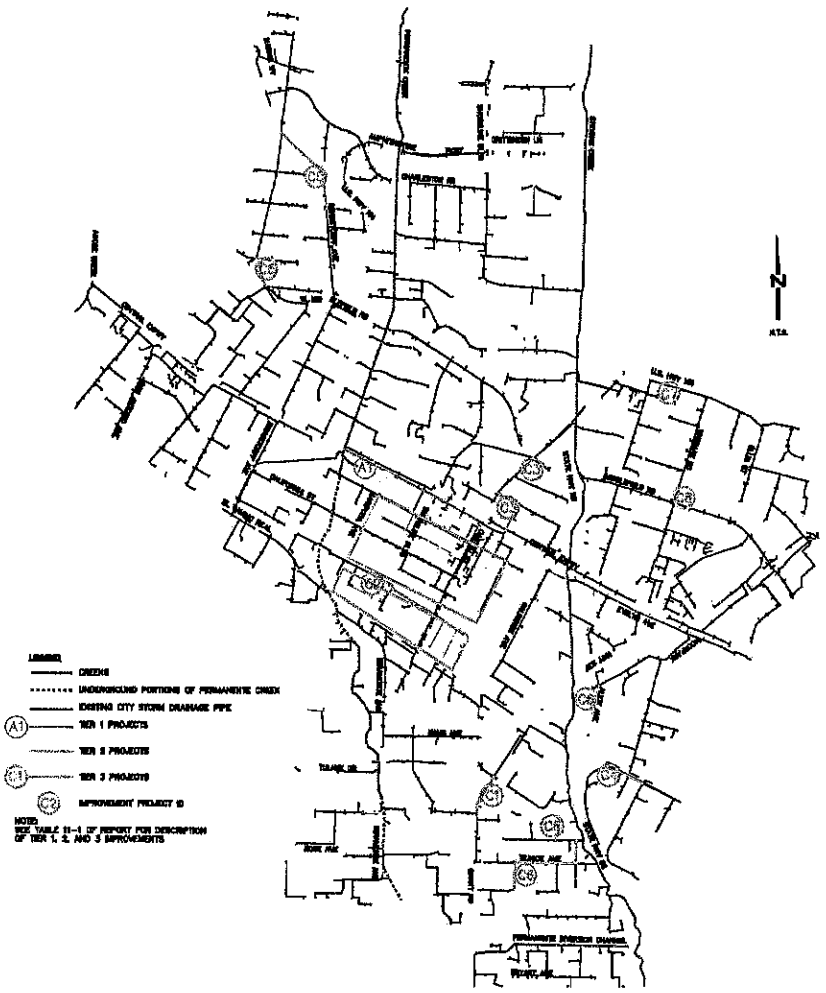
NV5

City of Mountain View Storm Drainage Master Plan

- **Client Contact:** Rebecca Shapiro | Associate Planner | 650.903.6306

Nolte was selected to evaluate the City's storm drainage systems, including pipes, pump stations, and creek improvements. The project included analyzing 24-inches and larger diameter pipes for the 10-year storm event, and determining the adequacy of existing storm drains. Nolte identified system deficiencies and evaluated the effectiveness of the City's pump station operations and maintenance programs. Nolte developed an action plan for both short-term and long-term storm drainage needs. We also provided input on the latest storm water regulations, as well as an evaluation of the City's current standard provisions, design criteria, storm drainage fee schedule, and storm reserve fund. The final deliverable was a 10-year improvement plan and report with implementation costs and hydraulic modeling.

Since completion of the master plan, the City has directed land developers to consult with Nolte on proposed drainage improvements. The City continues to recognize the quality and completeness of our work.



Improvement project locations by priority

Key Project Highlights

- Hydrologic Analyses
- Piping System Hydraulics
- Stormwater Quality Considerations
- Project Cost Estimating

Benefits

- Short-Term and Long-Term Action Plan for Infrastructure Improvements
- Sustainable Implementation Plan

Similarities to Proposed Work

- Hydraulic Analyses of Pipeline Network
- Incorporation of Stormwater Quality Requirements
- Development of Capital Improvement Program

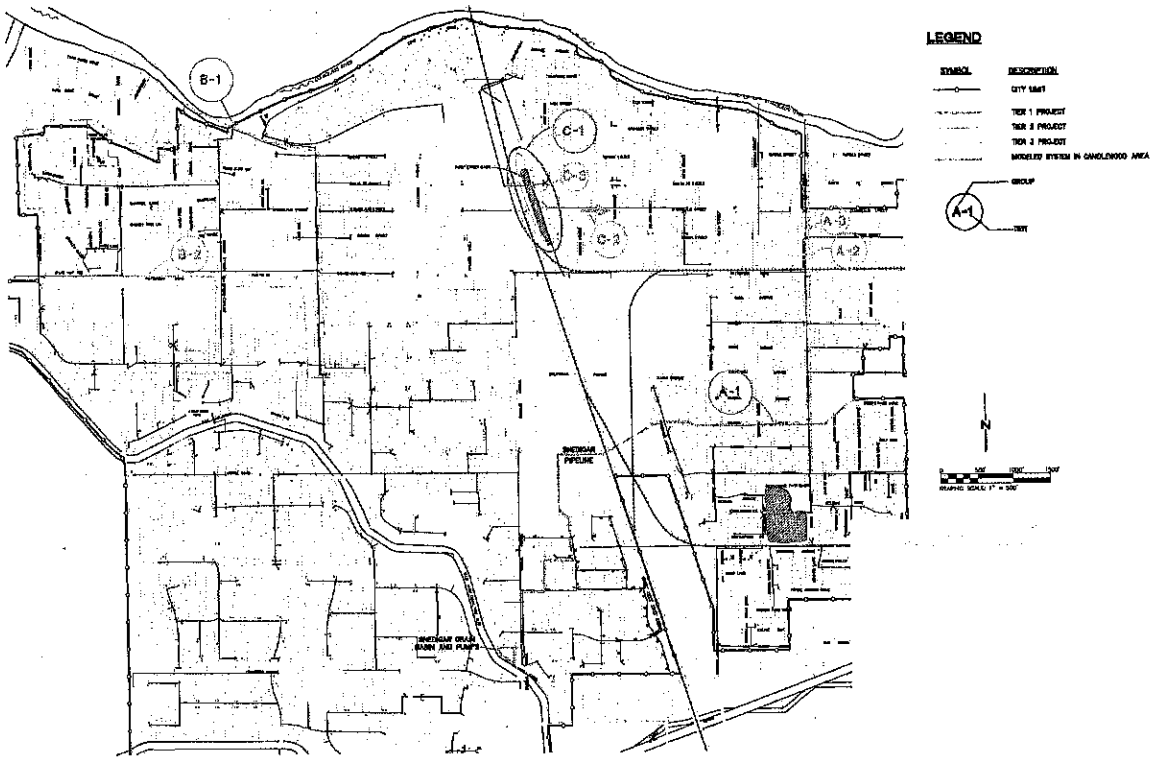
City of Riverbank Storm Drain Master Plan

- **Client Contact:** J.D. Hightower | Community Development Director | 209.863.7124

In support of a new General Plan for the City of Riverbank, Nolte was retained to prepare a storm drain master plan. The General Plan envisions significant growth in the community over a 20-year planning horizon with a population increase from 20,000 to 55,000.

The City relies heavily on pumping, detention basins, and an outfall system for managing flows. These elements are not currently meeting the level of service requirements and localized flooding has occurred. An assessment of existing storm drainage facilities was performed through review of existing data and field visits conducted with City operations personnel. Nolte developed a comprehensive model of the existing components to identify how the elements function and then determined methods to optimize the performance of the system to achieve the best use of existing facilities.

Nolte also provided alternative storm drainage systems and identified areas where regional treatment facilities may offer a cost effective means to create capacity for infill projects. For new growth areas, developers' storm drainage proposals were reviewed to develop policies for new development.



NV5 prioritized and grouped drainage improvements into three tiers with different line types

N|V|5

Topographic surveys were conducted on existing pipelines, basins, pump stations, and problem flooding areas to obtain pipeline inverts, component sizes, basin elevation, and flow path. A hydraulic analysis was then performed to model and analyze the main pipeline components, pumping systems, and detention basins. Based on the analyses, the deficiencies in the existing piped system were identified and possible solutions developed.

A conceptual storm drainage facilities plan for the new General Plan Update areas and a corresponding cost estimate were developed. The current impact fees for storm drainage infrastructure were reviewed and adjustments recommended to adequately cover the recommended improvements.

Nolte provided recommendations pertaining to compliance with NPDES requirements and water quality for existing facilities and future development. A draft and final Storm Drainage Master Plan was prepared which included prioritizing identified projects along a time line, and determining when the work needs to be accomplished. Cost estimates for the various capital improvement projects were also furnished.

Key Project Highlights

- Hydrologic/Hydraulic Analyses
- Hydraulic Model
- Capital Improvement Program

Benefits

- Delineation of Flood-Prone Areas
- Implementation Plan for Drainage Improvements/ Future Development
- City Standards Consistent with Statewide Stormwater Quality Requirements

Similarities to Proposed Work

- Identification of Problem Areas
- Hydraulic Analyses of Pipeline Network
- Linking Infrastructure Requirements to Future Development

Adobe Creek Flood Control Improvements-El Camino Real/Foothill Expressway

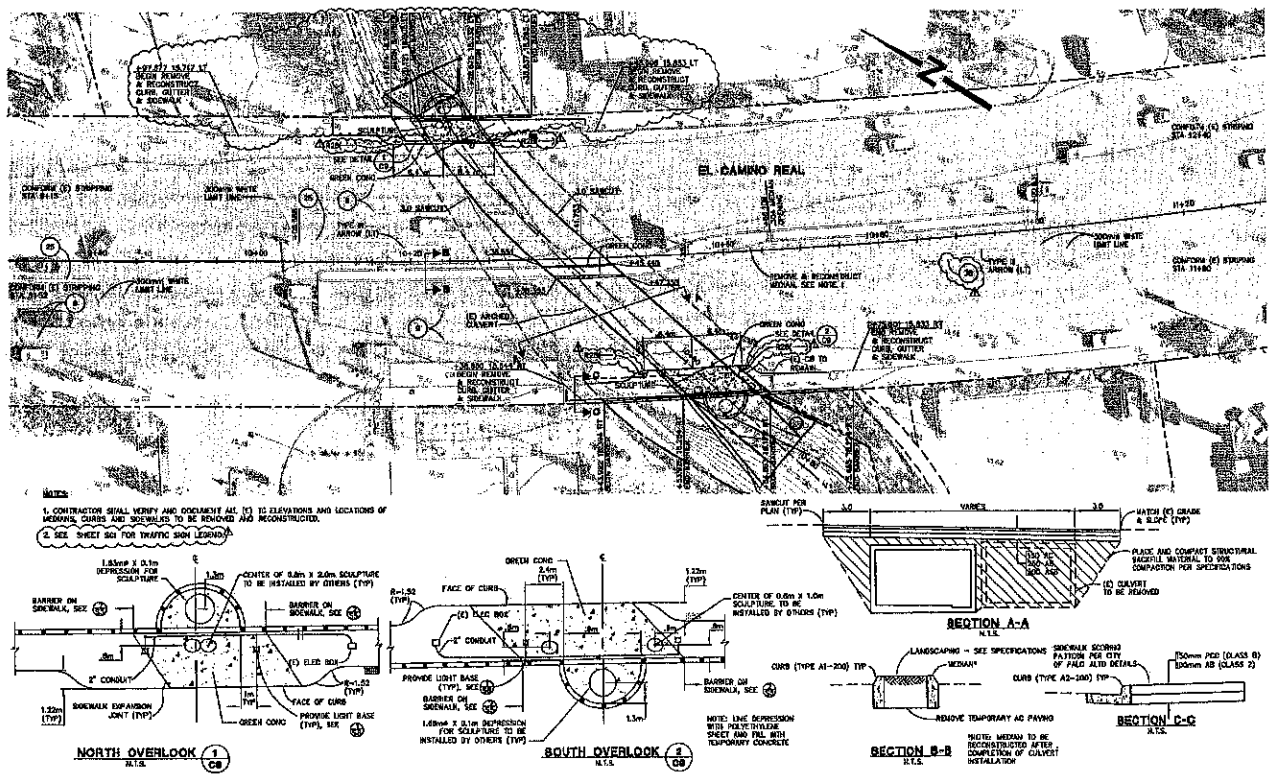
- **Client Contact:** Afshin Rouhani | Santa Clara Valley Water District | 408.265.2607 x2616

Nolte was awarded a contract with the Santa Clara Valley Water District (SCVWD) for design and survey services for flood control improvements on 2.5 miles of Adobe Creek from El Camino Real to Foothill Expressway. The project consisted of four major segments:

El Camino Real over Adobe Creek

Nolte designed a new reinforced concrete box culvert along Adobe Creek at El Camino Real. Services included design of the concrete box culvert, associated headwalls and wing walls, and pedestrian overlooks at each end of the culvert. All of the structures were designed to meet ACI and Caltrans requirements. The concrete box culvert consisted of a single cell 20-feet wide by 12-feet deep box section 15-feet long. The pedestrian overlooks included one 8-foot diameter balcony at each end of the box culvert overlooking Adobe Creek. Overlooks were constructed of cast-in-place concrete and included architectural concrete inlays on the walking surfaces. Public Art was also incorporated into the site as part of the Palo Alto City Gateway. This segment included:

- 20-feet wide by 12-feet high box culvert under six lanes of El Camino Real
- Maintenance road and ramp upgrade
- Gateway definition features for the City of Palo Alto
- Utility replacement and relocation
- Three Phase Construction Planning
- Traffic Control Plans



The proposed drainage improvements overlay on aerials for visualization

Foothill Expressway over Adobe Creek

Nolte provided the structural design for new concrete headwalls, retaining walls, and warped wing walls for a new 12-feet diameter, 150 feet long pipe culvert to be installed using the "pushed-pipe tunneling" method. All of the walls were designed to meet ACI and Caltrans design requirements. Modifications were made to the adjacent reinforced concrete box culvert headwalls to tie the new wall structures to the existing structures. The concrete headwalls were approximately 20 feet in height and the adjacent retaining walls ranged in height from approximately 20 feet to approximately 8 feet.

The new box culvert invert was set approximately three feet above the invert of the existing channel to allow the culvert to function at high flows while maintaining channel velocities and the sediment carrying capacity of the existing channel at low flows. The existing channel was also reconfigured to facilitate fish passage. This segment included:

- 12-feet by 8-feet box culvert under a 25 feet deep fill on Foothill Expressway
- Permitting by Santa Clara County Roads and Airports
- Habitat restoration area
- Temporary access ramp construction
- Traffic control planning

13 Erosion Sites

Nolte developed preliminary designs to repair erosion damage at 13 sites identified by SCVWD's maintenance department. The design effort started with an alternatives evaluation, which included consideration of H-Pile and lagging systems, cribbing and rock placement. A major concern was transportation of construction materials along the channel from access ramps in the 2.5 mile reach. The rock alternative was selected and passed forward to SCVWD staff to provide construction documents or perform the construction using in-house maintenance crews.

Nolte also provided topographic and boundary surveys and right-of-way engineering for the 13 sites along the creek adjacent to the cities of Palo Alto and Los Altos. Supplemental control was established near each site utilizing GPS and conventional survey methods to densify the control point network provided by SCVWD. Each site was visited to collect detailed topographical data and boundary evidence to establish the limits of required right-of-way easement takes.

Surveying included over 50 parcels of privately owned land adjacent to Adobe Creek to determine boundary location and to map topographic features within the riparian corridor. Nolte's surveyors performed the office analysis of more than 50 title reports, prepared a record boundary map and conducted field boundary location surveys to determine precise extents of necessary right-of-way takes and easements for the project. Additionally, we prepared the appraisal maps, plats, and legal descriptions necessary for negotiations by SCVWD to secure the necessary right-of-way. This segment included:

- 13 bank erosion repair sites
- Habitat restoration area
- Wetlands mitigation site

Foothill Mitigation Site

Nolte designed a wetlands and habitat mitigation area on Adobe Creek adjacent to the Foothill Expressway. The 15-acre site is intended to be used for mitigation of habitat affected by the Adobe Creek projects and other construction maintenance work performed by SCVWD. The work required a detailed inventory of the existing habitat and vegetation. After the detailed site analysis, a new vegetative scheme was developed to mimic the natural environment. An interim irrigation system was developed using a storage tank and pump system. The irrigation system was intended to function while the vegetation became established and during periods of severe drought.

Nolte directed a team that consisted of civil engineers, environmental habitat restoration specialists, and landscape architects.

Design for all projects involved coordination with three townships, local utilities, Caltrans, US Army Corps of Engineers, California Department of Fish and Wildlife, the US Department of Fish and Wildlife, and the Regional Water Quality Control Board.

Key Project Highlights

- Drainage Modifications
- Construction in a Residential Environment
- Third Party Utility Owner Coordination
- Construction Cost Estimating
- Multiple Agency Coordination
- Topographic and Boundary Surveys
- Right-of-Way Engineering
- Structural Design
- Traffic Control Plans

Benefits

- Improved Flood Protection
- Environmental Enhancement for Public
- Habitat Restoration Area
- Wetlands Mitigation

Similarities to Proposed Work

- Hydraulic Analyses
- Sustainable Solutions to Remedy Hydraulic Bottlenecks
- Sensitivity to Public Concerns

Work Plan

The Work Plan detailed below develops our previous outline approach into a series of logical and sequential tasks. **In addition, in this section, we have presented our proposed level of effort showing estimated labor hours by task.**

Project Task Descriptions

Task 1: Update Existing Drainage Inventory and Baseline Information

This task will start with a review of the existing maps and data available in Town records. A meeting will also be conducted as part of this task, which will include both operations and maintenance and engineering staff. Operations staff will provide valuable assistance and focus on the most useful data and known system deficiencies. This discussion will also clarify the specific location of the problems noted in previous high intensity events and the probable cause of each problem.

Record data will be reviewed in the field. The review will include a visual inspection of previously identified elements and a search for any missing components. On the base map we will locate the various drainage components to allow effective maintenance and expansion when necessary. Rim and invert elevation data will be collected where reasonably feasible. This effort may be constrained by access to the facilities through private lands, physical constraints in opening inlets and manholes, and by problems locating facilities that have been paved over or otherwise obscured by construction.

Drainage information will be updated in both GIS and AutoCAD format.

- **Deliverable:** Updated existing drainage system information in GIS/AutoCAD

Task 2: Refine Drainage Areas

Significant work has already been performed in delineating drainage basins and flow paths. Under this task, this effort will be continued using the established base. The data will also be used to create subareas and flow paths for areas immediately upstream of previously identified problem areas.

Field verification of the major flow paths will be conducted. Major flow restrictions will be noted.

Additional survey data will be collected at this time. In this task, cross-sections of Atherton Channel will be developed upstream of each public road crossing.

The drainage area map will be updated in ArcGIS and AutoCAD.

- **Deliverables:** Drainage area map in ArcGIS and AutoCAD; channel cross-section data.

Task 3: Calculate Design Flows

Design assumptions and criteria will be based on the 2013 Drainage Design Criteria for the various elements of the drainage system. When appropriate, these assumptions will include variations of the size of the design event with the area, and the land usage downstream requiring protection.

The design flow for each segment will be calculated. In most cases, the areas appear to be small enough that the Rational Method will be used for flow calculation.

The capacity of each segment will also be calculated. When open channel conditions occur, appropriate free board will be considered, as well as the bank full condition. StormCAD is the preferred program for performing pipe system calculations. StormCAD operates within the AutoCAD platform to facilitate transfer and presentation of information. Bentley Haestad FlowMaster,

CulvertMaster or USACE HEC-RAS programs will be used for open channel flow conditions.

- **Deliverables:** Drawing indicating capacities and flows in the existing drainage system; cross-sections and water surface profile data from the computer model.

Task 4: Update Townwide Drainage System Deficiency Map

Under Task 4, historical flooding locations will be updated based on information collected and input from the community. The weaknesses of the drainage system will be identified from the hydrologic and hydraulic analyses defined in Tasks 2 and 3. The final Drainage Deficiency Map will define the inundation limits and locations based on design events.

- **Deliverable:** Drainage Deficiency Map in AutoCAD/GIS format.

Task 5: Develop Prioritized Improvement Projects with Costs

Necessary drainage system improvements will be defined. The need for improvements will be defined by capacity limitations as well as the need to remedy problems identified in historical events. In storm drainage analyses and alternatives development, often only a limited number of alternatives exist. This is particularly true in developed residential areas where open space for detention basin storage is nonexistent and land is unavailable for expansion of existing channels. We anticipate adopting the following criteria to provide an adequate level of protection for the community:

- **10-Year Event:** Prevent flooding of streets and private property.
- **25-Year Event:** Prevent flooding of intersections and collector streets.
- **50-Year Event:** Prevent flooding of El Camino Real and Middlefield Road.
- **100-Year Event:** Prevent flooding from Atherton Creek.

Strategies for prioritized implementation will be established in conjunction with Town staff. We recognize that in a town of this size the local community will have significant concerns about potential project alternatives, and that community input is an important criterion to be considered in alternatives evaluation.

- **Deliverables:** Draft drawing(s) showing project sizes and locations; draft list and description of prioritized improvement projects.

Task 6: Stormwater Management Areas and Recommendations for NPDES C.3 Requirements Compliance

Stormwater management areas based on the drainage deficiency map will be defined in Task 6. We will recommend best management practices (BMPs) in compliance with the NPDES C.3 requirements. The recommendations will include simple modifications for existing onsite detention basins, as well as procedures to be applied for new developments.

- **Deliverable:** Memorandum on Stormwater Management Recommendations.

Task 7: Public Consultation and Report Preparation

A public consultation program will be conducted to facilitate two-way communication between the public and elected officials, and the study team. We propose that this program include three participation sessions as follows:

- The first session will introduce the project and its overall scope. The team will focus on public concerns about flooding and drainage, and on gathering anecdotal information on problem areas in the Town since the 2001 Drainage Study was completed.
- The second session will present drainage issues, identify necessary projects and a suggested relative

priority for these projects. Public comment will be incorporated into the project's draft report.

- The final session will present the draft project report to the Town Council.

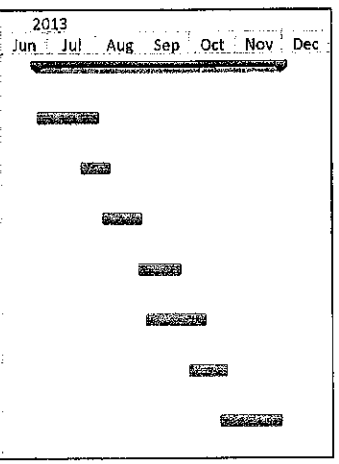
The draft report will summarize the findings of the study and will incorporate the deliverables from each task and from the first two public consultation sessions. Comments received from Council after the final session will be discussed with Town staff and agreed revisions will be made to finalize the report.

Three bound copies of a final report will be delivered to the Town. An additional copy of maps, field notes and calculations will also be delivered. Electronic copies of the report and notes/calculations will be included.

- **Deliverables:** Minutes summarizing public meetings with identified action items; draft report; final report

Project Schedule

ID	Task Name	Duration	Start	Finish
1	Town of Atherton Drainage Update Project	115 days	Mon 6/24/13	Fri 11/29/13
2	Update Existing Drainage Inventory and Baseline Information	6 wks	Mon 6/24/13	Fri 8/2/13
3	Refine Drainage Areas	3 wks	Mon 7/22/13	Fri 8/9/13
4	Calculate Design Flows	4 wks	Mon 8/5/13	Fri 8/30/13
5	Update Townwide Drainage System Deficiency Map	4 wks	Wed 8/28/13	Tue 9/24/13
6	Develop Prioritized Improvement Projects with Costs	6 wks	Mon 9/2/13	Fri 10/11/13
7	Stormwater Management Recommedations	4 wks	Mon 9/30/13	Fri 10/25/13
8	Public Consultation and Report Preparation	6 wks	Mon 10/21/13	Fri 11/29/13



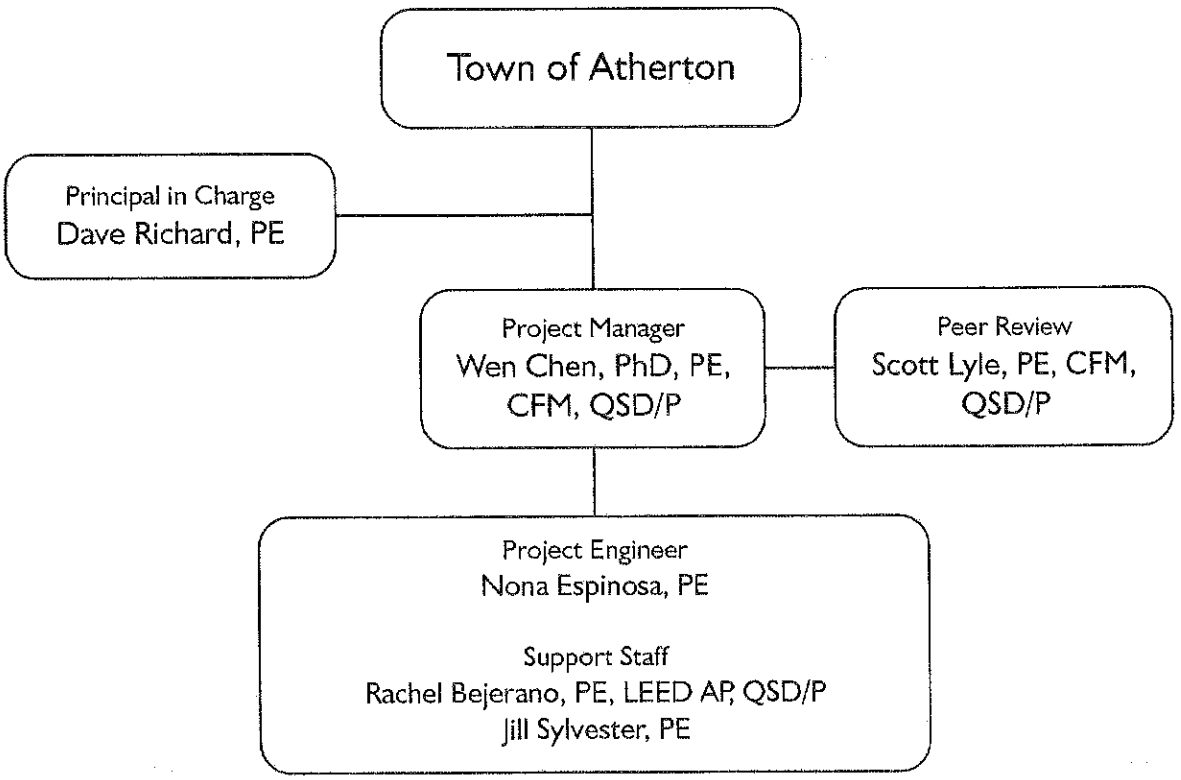
Level of Effort

Task No.	Task Description	Associate	Engineering Manager	Project Engineer	Assistant Engineer	Junior Engineer	CADD Technician III	Chief of Survey	2-Person Survey Crew	Subtotal Hours by Task	Total Hours by Task
1	**Update Existing Drainage Inventory and Baseline Information**										
1a	Review Existing Plans			8	12	12				32	
1a(i)	Meeting with Community		4	4						8	
1b	Field Verification			4	8	8				20	
1b(i)	Field Surveying							4	4	8	
1c	Update Drainage Information in GIS				8	8	8			24	
	Subtotal	0	4	16	28	28	8	4	4	92	92
2	**Refine Drainage Areas**										
2a	Define Areas			4	4	4				12	
2b	Field Verification			4	4	4				12	
2c	Update Drainage Area Map			4		8	8			20	
	Subtotal	0	0	12	8	16	8	0	0	44	44
3	**Calculate Design Flows**										
3a	Assumptions and Criteria		2	2						4	
3b	Calculate Flow	2	2	8	16	16				44	
3c	Calculate Capacity		2	8	16	16				42	
	Subtotal	2	6	18	32	32	0	0	0	90	90
4	**Update Townwide Drainage System Deficiency Map**										
4a	Update Historical Flooding Locations			2	4	4				10	
4b	Identify Under Capacity Components		2	4	4	4				14	
4c	Update Drainage Deficiency Map	2	2	4	4	4	4			20	
	Subtotal	2	4	10	12	12	4	0	0	44	44

Task No.	Task Description	Associate	Engineering Manager	Project Engineer	Assistant Engineer	Junior Engineer	CADD Technician III	Chief of Survey	2-Person Survey Crew	Subtotal Hours by Task	Total Hours by Task
5	**Develop Prioritized Improvement Projects with Costs**										
5a	Define and Estimate Projects		4	8	4	4				20	
5b	Develop Strategies and Priorities	2	4	8	12	12		-		38	
	Subtotal:	2	8	16	16	16	0	0	0	58	58
6	**Stormwater Management Areas and Recommendations for NPDES C.3 Requirements Compliance**										
6a	Define Area of Concerns		2		4		4			10	
6b	Develop Recommendations		2	4	4					10	
	Subtotal:	0	4	4	8	0	4	0	0	20	20
7	**Public Consultation and Report Preparation**										
7a	Public Presentation (3)		6			2	2			10	
7b	Draft Report		2	4	8	8	12			34	
7c	Final Report		2	4	4	4	8			22	
	Subtotal:	0	10	8	12	14	22	0	0	66	66
	Totals	**12**	**72**	**168**	**232**	**236**	**92**	**8**	**8**	**414**	**414**

Key Staff

Preparation of the updated storm drainage study will be accomplished by experienced water resources staff thoroughly versed in all aspects of hydrologic, hydraulic, and water quality analyses. For efficient production and to leverage our previous work for the Town, the study will be managed from our San Jose office with analytical work executed by staff who completed the earlier master plan for the Town. A description of specific project roles and qualifications is found in the accompanying personnel matrix with resumes following the matrix.



Project Responsibilities	Key Qualifications
Wen Chen, PhD, PE, CFM, QSD/P | Project Manager	
▪ Serve as day-to-day contact for Town on all project management issues ▪ Oversee the production of all project deliverables, with a particular emphasis on system hydraulics and alternatives development ▪ Monitor, manage, and report on project budget and schedule status ▪ Develop list of prioritized projects ▪ Lead technical presentations to stakeholders	▪ Senior project lead/manager for multiple drainage systems/creek restoration/bridge replacement projects including Stanford University, Lower Colgan Creek (Santa Rosa), Newell Road and Pope-Chaucer (Palo Alto) ▪ Strong background in numerous analytical programs including HEC-RAS unsteady model, FLO-2D, Mike 11, Mike 21, HEC-1/HEC-HMS, and HEC-6 ▪ FEMA program manager with comprehensive knowledge of procedures and protocols for flood plain mapping and flood control enhancements
Dave Richard, PE | Principal in Charge	
▪ Ensure that sufficient resources are assigned to project to meet deliverables schedule ▪ Periodically audit quality control procedures ▪ Meet with Town on quarterly basis to discuss performance and to ensure expectations are met	▪ Regional discipline director with authority to assign resources from multiple offices in Northern California ▪ Senior project manager with 35 years experience delivering infrastructure improvement projects with construction costs ranging from $1 to $65 million
Scott Lyle, PE, CFM, QSD/P | Peer Review	
▪ Review hydraulic modeling set-up and results ▪ Provide feedback on potential stormwater management policies ▪ Peer review technical deliverables	▪ Certified floodplain manager with over 28 years of experience with floodplain mapping over 500 miles of streams in California and Nevada ▪ Project manager for flood insurance studies in Santa Clara County, including hydrologic and hydraulic analyses ▪ Project engineer for $25 million channel restoration project that included flood channel improvements, box culverts, floodwalls, scour mitigation measures, and riparian habitat restoration
Nona Espinosa, PE | Project Engineer	
▪ Lead field investigations of local drainage facilities ▪ Set-up and execute hydraulic models ▪ Identify problem areas and potential solutions	▪ 20 years design experience in drainage and flood control improvements ▪ Project engineer for 2001 Town of Atherton Drainage Study, Adobe Creek Flood Control Improvements, and San Tomas Aquino Creek Box Culvert Repairs
Rachel Bejerano, PE, LEED AP, QSD/P | Support Staff	
▪ Address stormwater quality issues/potential policies ▪ Assist in development of improvement projects	▪ Project manager responsible for C3 compliance for multiple assignments in Contra Costa, Santa Clara, and Santa Cruz counties ▪ 15 years experience in design and construction of utility infrastructure systems ▪ Design leader for multiple utility replacement projects for City of Mountain View
Jill Sylvester, PE | Support Staff	
▪ Assist in execution of hydraulic models ▪ Prepare cost estimates for proposed construction projects	▪ Project engineer for multiple drainage assignments for Stanford University ▪ Hydraulic modeler for pressure systems using SewerCAD, WaterCAD, and StormCAD software for projects in Santa Clara, San Joaquin, Solano, and Sacramento counties

Wen Chen, PhD, PE, CFM, QSD/P

Project Manager

Wen is a water resources engineer/engineering manager with 20 years' experience in water resources planning with a focus on area drainage master plans and studies, NFIP flood insurance studies, and risk mitigation. His specialties include advanced watershed hydrologic and hydraulic studies, flood control structure assessment and alternatives development, stream restoration, and storm water management. Highlights of his qualifications:

- Managed various watershed master studies/planning with drainage area up to 280-square miles.
- Contributing author to various FEMA flood study documents, including watershed approach (PM56), Discovery Process/Coordinated Needs Management Strategy (FEMA study evaluation procedure), Levee accreditation and mapping procedure (LAMP), etc.
- Lead technical member to ASFPM/FMA on one-dimensional unsteady and two-dimensional modeling and floodplain mapping symposium/forum
- Technical advisor to FEMA Region IX, and responsible for quality assurance for over 30 flood insurance studies involving levee, dam, alluvial fans where hydraulic performance was evaluated using 1-D/2-D models
- Area lead reaching out to California communities on flood risk studies, mitigation planning, and floodplain mapping under the FEMA Risk Map program

Education

- PhD Civil Engineering - Arizona State University - Tempe (2002)
- MS Environmental Engineering - Tsinghua University - China (1998)
- BS Civil Engineering - Hunan University - China (1993)
- Certificate Project Management Master - University of Pittsburgh (2006)

Registration

- Professional Engineer - CA #C71767 (2007)
- Certified Floodplain Manager - CA #US-76-0067 (2004)
- Qualified SWPPP Developer/Practitioner - CA #23574 (2012)

Relevant Project Experience

- **Lower San Francisquito Creek (SFC) Flood Protection Engineering Services:** Responsible for hydrologic update and hydraulic alternatives development to increase the flood protection level of the lower SFC reach. An unsteady state HEC-RAS model, coupled with the FLO-2D program, was used to propose alternatives acceptable to all involved agencies/stakeholders. Alternatives include upstream offline detention, creek channel widening, bridges/culverts lift-up, floodwall installation, and in-stream flow restrictor/runoff diversions. The proposed scenarios were organized in an ArcGIS environment to facilitate stakeholder engagement - Santa Clara County, CA

- **Watershed Master Drainage Planning Study:** Responsible for preparing data collection reports, hydrologic and hydraulic models and floodplain delineations for the 280-square-mile basin of the Buckeye and Sun Valley watersheds, as well as identifying and resolving technical issues in performing hydrologic and hydraulic analyses. Also as project manager, providing quality assurance, report preparation and coordination of engineering reviews. Multiple HEC-1 models were developed to determine the 100-year discharges at key locations within the watershed; coupled HEC-RAS unsteady state models with HEC-1 models were built to evaluate critical flood conveyance structures such as dams, levees, and canals in the watershed. The findings of the project were presented at the 2004 ASCE Water Congress and FMA conferences - Maricopa County, AZ

- **Lower Colgan Creek Restoration:** Project manager for restoration of approximately 1.4 miles of urban creek and flood control channel from West Victoria Avenue to Bellevue Crossing, including modifications to the undersized Burgess Drive Bridge for anticipated creek flows, addition of a pedestrian bridge, and a future Dutton Avenue Extension Bridge. Efforts include coordination with the Sonoma County Water Agency regarding maintenance requirements, development of updated hydraulic model for the creek, preparation of sediment transport analyses, and bioengineering design - Santa Rosa, CA

- **Suisun Watershed Floodplain Study:** The floodplain study provided drainage design alternatives to Solano Transportation Authority (STA) to resolve I-80 overtopping during severe storm events and alleviate flood issues in communities in the vicinity of Ledgewood Creek and Suisun Creek. HEC-HMS was used to determine discharges along flow paths on the watershed and flow patterns and water surface elevations were established using MIKE 11/21 suites. Coordinated with STA and other agencies on alternative formulations and analyses, and managed subconsultants - Solano County, CA

- **Department of Water Resources (DWR) Central Valley Floodplain Mapping:** Responsible for hydrology and hydraulics methodologies proposed to evaluate floodplains in the upper portion of the Central Valley. An unsteady state HEC-RAS model coupled with the FLO-2D program was used to model levee flood protection levels, upstream lake/dam operation strategy, and regional detention basin operational parameters. Provided review and comment on the hydraulic model layout for the study streams in Central California - Department of Water Resources

- **Flood Insurance Studies (FIS) QA/QC Review:** Provided detailed quality control and assurance for over 30 complex FISs in riverine and coastal floodplain mapping in FEMA Regions VI, IX and X. The reviews involved hydrology, hydraulics, and floodplain mapping. Coordinated with communities, study consultants, FEMA engineers, and FEMA HQ to resolve appeals or discrepancies in the studies and brought them in compliance with FEMA Guidelines and Specifications. Applied expert knowledge of HEC-RAS unsteady model, FLO-2D, MIKE 11 and 21 including spectral wave FM module, FEMA FAN program, HEC-1/HEC-HMS, HEC-5, etc. to the reviews. Review of representative projects included Tortalito Alluvial Fan FLO-2D Study in Pima County; Lower Smith River Coastal Study in Del Norte County; Lower Feather River Study (part of the 2002 Comprehensive Study by USACE - Sacramento District); Cosumnes River Floodplain Mapping Study in Sacramento County; and West Range Levee Certification Package in Las Vegas, Clark County - FEMA

- **New Flood Studies Planning in Santa Monica HUC-8 Watershed:** Developed a matrix to prioritize new flood studies in a 500-square-mile watershed that included portions of Los Angeles and Ventura Counties; applied the watershed approach based on needs, risks, and topographical data to develop the matrix; defined the study area within the Watershed and suggested a combined HEC-HMS coupling with XP-SWMM (1D/2D) for the 130 square miles of urbanized watershed. The findings were presented at the 2010 FMA Annual Conference in Reno, and the model was taken to FEMA HQ for new Procedure Memorandum (PM56) development - FEMA

- **FEMA Region IX Dam Inundation Mapping Database Project:** Led the development of the scope of work and defined the architecture of the dam inundation geodatabase for FEMA Region IX. Information from dam inundation mapping and emergency action plan was collected from various communities, which generalized the attributes of dam inundation mapping into the geodatabase after review. The findings on Dam Inundation Geodatabase Development were presented at the 2011 FMA Annual Conference in San Diego - FEMA

- **Dam Rehabilitation Alternative Development:** Developed scope of work and cost estimates and conducted technical analyses for various dam rehabilitation alternatives using HEC-RAS unsteady models. The proposed alternatives for the overall rehabilitation or replacement of Buckeye FRS No. 1 included coordination with project stakeholders and public input to identify and select a preferred alternative that addressed dam safety concerns and maintained flood control benefits to downstream properties for the next 100 years. The findings were presented at the 2004 Association of State Dam Safety Officials annual conference - Buckeye, AZ

Dave Richard, PE

Principal in Charge

Dave is a Northern California discipline director and a senior project manager in the water group. In these roles, he is responsible for specific projects as well as for the allocation of manpower and resources to projects. He is also responsible for client satisfaction with NV5's services. He has been with the firm since 1984 and is fully knowledgeable of the capabilities of the entire organization. As a principal in charge, Dave is typically responsible for project oversight, including allocation of manpower and resources, monitoring project schedules, quality assurance, value engineering, and client satisfaction.

Education

- MS Environmental Engineering - University of California - Davis (1992)
- BS Civil Engineering (Sanitary Option) - Michigan Technological University (1978)

Registration

- Professional Engineer - CA #C33479 (1981)

Relevant Project Experience

- **Stanford University Drainage Improvements:** Principal in charge for multiple drainage improvement projects throughout campus, including the East Campus and West Campus Drainage Studies, and Gerona Ditch Modifications - Stanford University, CA
- **Lower Colgan Creek Restoration:** Principal in charge for the restoration of approximately 1.4 miles of urban creek and flood control channel from West Victoria Avenue to Bellevue Crossing, including modifications to the undersized Burgess Drive Bridge for anticipated creek flows, addition of a pedestrian bridge, and a future Dutton Avenue Extension Bridge - Santa Rosa, CA
- **City of Vacaville On-Call Contract:** Principal in charge for annual on-call contract for water utilities department, including planning, design, and operational assistance for water supply and distribution system - Vacaville, CA
- **ARRA Sewer Rehabilitation Project:** Principal in charge for this $5 million city-wide sewer rehabilitation project. The rehabilitation consists of sewer improvements (open cut trenches and pipe bursting) at twelve locations to maintain capacity in the sewer system and reduce the likelihood of sanitary sewer overflows (and in doing so, protect public health). The improvements will also reduce the amount of infiltration and inflow of rainwater and groundwater into the sewer system from defects and cracks in the pipes and manholes - Burlingame, CA
- **Influent Stormwater Retention Basin:** Principal in charge/project manager of a $5 million, 1.5 MG concrete reservoir, effluent pump station, and piping improvements at wastewater treatment facility designed to mitigate impacts from significant wet weather events - Burlingame, CA
- **University of California - Merced Infrastructure Master Plan:** Principal in charge/project manager for an integrated water, wastewater, and recycled water master plan for new campus and 2,000 acre community plan area - Merced, CA
- **Pump Station Design Manual:** Principal in charge/project manager for preparation of comprehensive pump station design manual involving design criteria for one 50 MGD pumping stations for large urban sanitation district - Sacramento, CA
- **Manteca North Trunk Sewer Design:** Project manager for the preparation of plans, specifications, and cost estimates for approximately 3,500 lineal feet of 60-inch PVC-lined reinforced concrete pipe and 1,300 lineal feet of 36-inch. The design included coordination with the City, local utilities, and the South San Joaquin Irrigation District. Project included a bore and jack section beneath a high traffic area and design modifications to address conflicts with current and future City projects - Manteca, CA

NV5

Scott Lyle, PE, CFM, QSD/P

Peer Review

Scott has over 28 years' experience in the management and design of multi-objective water resources projects including flood control channels, watershed analyses, detention basins, master plans, and storm drain design. His specific technical skills include performing detailed hydrologic and hydraulic analysis (HEC-HMS, HEC-RAS), sediment transport analyses, field surveys, floodplain mapping (GIS/CADD), flood control channel design and storm water quality design and management services.

Education

- BS Civil Engineering - San Diego State University (1984)
- Graduate Studies Environmental Hydrology - University of California - Irvine (2007)

Registration

- Professional Engineer - CA #C44062 (1989)
- Certified Floodplain Manager - CA #99-00013 (1999)
- Qualified SWPPP Developer/Practitioner - #00817 (2011)

Relevant Project Experience

- **FEMA's Scientific Resolution Panel:** The Administrator of FEMA makes available an independent scientific body, referred to as the Scientific Resolution Panel (SRP) that can be convened when deemed necessary by FEMA or upon a joint agreement between FEMA and a community. SRPs are independent panels of experts organized, administered, and managed by the National Institute of Building Sciences. They are established for the purpose of reviewing and resolving conflicting scientific and technical data submitted by a community challenging FEMA's proposed flood elevations and bringing resolution to any challenging issues. Based upon his wide experience in water resources, Scott has been appointed to serve on such a panel which is convened, as necessary, to meet FEMA's technical needs.

- **FEMA Digital Flood Insurance Rate Maps:** Project QA/QC manager for conversion of all paper Flood Insurance Rate Maps for 20 Northern California Counties. Tasks include meeting with communities to discuss project objectives, collecting available data, coordinating staffing for workload, and supervising the QA/QC of the final product. In addition to the conversion, approximate levee analyses were completed to determine which levees had valid certification. Once the levees were determined to have failed, the resultant floodplain boundaries were drawn and incorporated into the newly converted maps - Northern California

- **San Francisco Bay Flood Insurance Study:** Project manager for a FEMA project to develop a Digital Flood Insurance Rate Map (DFIRM) and Flood Insurance Study (FIS) report for the central San Francisco Bay. The DFIRM and FIS report was produced for the City of San Francisco in the FEMA County-wide Format. The first phase of this contract involved the development of new topographic and aerial data, for the central San Francisco Bay. The second phase of this project included the coastal hydraulic analyses and preliminary mapping of the coastal flood hazard areas of the study area - San Francisco, CA

- **Rattlesnake Creek Channel Design:** Project manager for hydraulic analyses and design of more than 6,000 feet of Rattlesnake Creek. Design included realignment and design for a 100-year storm event (3,900 cfs), changing and upsizing the drainage configuration for 2,500 feet of Community Road, removal of all non-native vegetation and replacement with native plants, widening the creek from 30 feet to 100 feet wide, creation of a linear park setting with a meandering walkway next to the creek. A LOMR was processed through FEMA documenting as-builts and floodplain revisions - Poway, CA

Nona Espinosa, PE

Project Engineer

Nona has over 20 years of experience as a design engineer in numerous water resource projects. Nona has performed hydrology and hydraulic analysis of storm systems, as well as hydraulic calculations, to determine pipe size, flow demands, capacities, and other pertinent data for sanitary sewer and water systems. Her designs include erosion control sites, hydraulic structures, sanitary sewer systems, water systems, pump stations, wastewater and drainage systems, and a snow-making system.

Nona is skilled in a number of modeling and engineering design programs, including AutoCAD, Cybernet, WaterCAD, Flow Master, Culvert Master, StormCAD, XPSWMM, PondPack, HEC-RMS, HEC-RAS, HEC-1, HEC-HMS, HEC-II, FAAST, and Primavera.

- **Atherton Drainage Study:** Performed hydrology and hydraulic analysis for the Town of Atherton. The study involved a total of over 4,760 acres of drainage area. Analyzed the existing drainage system and performed calculations using StormCad, Flow Master, and Culvert Master. Identified drainage areas and performed drainage calculation to determines flows. Identified deficiencies in the town's drainage system and compiled and verified residents' drainage complaints. Developed a prioritized list of improvement projects and prepared cost estimates - Atherton, CA
- **Citywide Storm Drainage Master Plan Study:** Provided hydraulic analysis for the evaluation of the City's storm drainage systems, including pipes, pump stations, and creek improvements - Mountain View, CA
- **Drainage Study:** Performed hydrology and hydraulic analysis for Stanford University and prepared the drainage report. Analyzed overland release conditions for the east side of the campus, an area roughly 670 acres. Identified drainage areas and performed drainage calculations using HEC-RAS, StormCad, Flow Master, and Culvert Master. Performed field investigation of the site. Developed a prioritized list of improvement projects and prepared cost estimates - Stanford University, CA
- **Lower Colgan Creek Restoration Project:** Performed the hydraulic analysis of the creek to comply with the City and Sonoma County Water Agency channel improvement design criteria. Analyzed the undersized Burgess Drive Bridge to capture the increase in runoff using HEC-RAS. The project aimed to restore approximately 1.4 miles of Colgan Creek from a sterile and polluted flood control drainage channel to a healthy and robust seasonal creek. The stream restoration with its planned riffles, pools, and streamside vegetation will create a sustainable aquatic and riparian habitat, but also a much-needed local community resource with a planned neighborhood park and open green space for recreation - Santa Rosa, CA.
- **Central Expressway Auxiliary Lanes Phase II:** Project designer for stormwater for roadway widening project to add an auxiliary lane on east bound Central Expressway. Responsible for providing roadway drainage and stormwater conveyance. In addition, the project will create approximately an acre of new impervious surface for which design features are required to comply with NPDES C.3 regulations for stormwater treatment. Work products will include project plans, a drainage report and backup information related to the design and capacity of stormwater treatment elements. The widening occurred between Mathilda Avenue and Fair Oaks Avenue, approximately 3500-feet in length, and included storm drainage facility corrections, bicycle access on the outside shoulders, and metal beam guard railing adjustments at the existing bridges - Santa Clara County, CA

Education

- BS Civil Engineering - University of California - Berkeley (1990)
- Certificate Erosion Control Compliance with NPDES Phase II - American Public Works Association (2004)
- Certificate Fundamentals of Erosion Control and Rolled Erosion Control Pro - John Towns & Associates, Inc. (2004)

Registration

- Professional Engineer - CA #C60547 (2000)

NV5

Rachel Bejerano, PE, LEED, AP, QSD/P

Support Staff

Rachel is a team manager for NV5 in our San Jose office in the site development and water group. As a project manager and senior engineer she has 15 years of experience in the design of stormwater, water, wastewater, and drainage systems. She has additional experience in the design of land development projects, including roads, parking, and grading. Rachel is a highly skilled team leader and an experienced supervisor in complex projects, both at the preliminary design and construction phases.

Education

- MBA Haifa University - Israel (2001)
- BS Civil Engineering - Technion - Israel (1997)

Registration

- Professional Engineer - CA #C70131 (2006)
- LEED Accredited Professional (2009)
- Qualified SWPPP Developer/Practitioner - CA #23343 (2012)

- **Oakwood Apartment Expansion:** Project manager responsible for C3 plan, implementing storm water BMPs, grading and drainage, erosion control measurements during construction (SWPPP), LID and BMP implementation, grass pavers, bio-swales, and planters - San Jose, CA
- **Clayton Garden Use Permit Application:** Project manager responsible for grading permit application, including parking, grading and drainage plan along, with C3 plans submittal for Contra Costa County based on the County Clean Water Act (utilizing the C3 calculator). The project included the redesign of an existing site to include a parking structure and treat runoff by flow through planters, bio-retention areas, and porous concrete for driveways - Concord, CA
- **I-80/680/SR 12 Interchange ICP:** Prepared erosion control plans, including hydroseeding areas and location of filter fabric and fiber rolls. This $2 billion program includes a series of phased interchange improvements, including I-80, I-680, SR-12, and Green Valley Road. In a joint venture, NV5 is responsible for road geometric design, bridge and retaining wall structural design, major water main relocations for the Cities of Benicia and Vallejo, and roadway drainage plans. Through alternative analysis, recommended the preferred alternative to STA regarding channel/bridge/culvert modifications. Construction is due to commence in 2013 - Solano County, CA
- **Suncrest Nurseries Stormwater Collection and Treatment System Design:** Project engineer responsible for the design of a storm water collection and treatment system design for water reuse in agricultural applications in Santa Cruz County. Tasks included hydrologic and hydraulic modeling to determine runoff quantities and size detention ponds and reuse distribution system layout and components and water quality analysis to specify emergent vegetation to be used to improve water quality - Santa Cruz County, CA
- **Craig Court Water and Sewer Main Replacement:** Project manager for the design of a 300-foot water and sewer main replacement. The design included two 8-inch water and sanitary sewer lines, addition of a fire hydrant, two sanitary sewer manholes, 12 sewer laterals, and 12 water laterals - Mountain View, CA
- **Parkhurst Terrace Domestic Water, Fire, Water, and Wastewater System Design:** Project engineer responsible for projects involving the evaluation of treatment system alternatives and the design of the treatment system, water distribution layout, and on-site wastewater disposal layout. Tasks included hydrologic and hydraulic modeling, water quality analysis, pipe and component specification, and wastewater disposal area calculations. Project met or exceeded all local, state and federal regulations - Watsonville, CA

JILL SYLVESTER, PE

Support Staff

Jill is a project engineer in the water group at NV5's San Jose office. Jill has a wide range of project experience, including drainage studies, pipeline design, infrastructure capacity studies, water system modeling, and PS&E preparation.

Education

- BS Civil Engineering - California Polytechnic State University - San Luis Obispo (2004)

Registration

- Professional Engineer - CA #C73849 (2009)

Relevant Project Experience

- **Lower Colgan Creek Restoration:** Project engineer for the restoration of approximately 1.4 miles of urban creek and flood control channel from West Victoria Avenue to Bellevue Crossing, including modifications to the undersized Burgess Drive Bridge for anticipated creek flows, addition of a pedestrian bridge, and a future Dutton Avenue Extension Bridge. Efforts include coordination with the Sonoma County Water Agency regarding maintenance requirements, development of updated hydraulic model for the creek, preparation of sediment transport analyses, and bioengineering design - Santa Rosa, CA
- **Drainage Study:** Performing hydrology and hydraulic analysis for Stanford University, including drainage report. Analyzed overland release conditions for the southwest area of the campus. Identified drainage areas and performed drainage calculations using HEC-RAS. Performed field investigation of the site - Stanford University, CA
- **Permanente Creek Flood Protection C.3 Mitigation:** Project engineer for Rancho San Antonio Park to review alternatives to provide storm water treatment for new retention basin and other improvements to county park site. Tasks included a memorandum with attachments documenting preliminary plans for potential treatment locations and impervious surfaces contributing to these permanent treatment best management practices - Los Altos, CA
- **CEQA Storm water Support:** Performed analysis of hydrology and hydraulic impacts on redevelopment of an existing grocery store site with at-grade parking, into a residential site with two apartment buildings, landscaping, and subterranean parking. Project included StormCAD analysis of existing storm drainage system - Mountain View, CA
- **Holly Sugar Sports Complex:** Project engineer for the design of a 105 gpm sanitary sewer pump station for the development of a regional sports complex located on a 166-acre property. The project included construction of 20 fields (eight soccer fields and 12 baseball fields), four parking lots, Tracy Boulevard widening (main access road), and utilities. Also included design of a Class I bikeway to connect pedestrians/bicyclists traversing from Larch Road to the sports complex - Tracy, CA
- **Courtland and Walnut Grove Sewer Projects:** Project/design engineer for approximately 10 miles of sewer force main and two horizontal directional drilling crossings for County Sanitation District 1. This $27 million pipeline and pump station project includes 4 submersible pumping stations, 20 miles of force main, and 5 horizontal directional drilling crossings within the California Delta for Sacramento Area Sewer District - Sacramento County, CA
- **City of Sacramento General Plan:** Prepared sewer capacity study evaluating the existing sewer capacity and whether improvements to the backbone system will be required for 2030 buildout conditions at five focus opportunity areas - Sacramento, CA

Litigation

The tables below provide a description of Nolte Associates, Inc.'s current and past litigation.

Current

Reference	Location	Case Open Date
Parrett v. Nolte & Warner, et al	California	4/25/2012

Past

Reference	Location	Case Open/Close Date
Heritage Todd Creek Metropolitan District v. Nolte	Colorado	2010/2012
City of El Centro v. Nolte	California	2009/2011
Moore v. Caltrans, Caterpillar, Inc, and Nolte California	California	2009/2011
Atlas-Allied, Inc v. San Diego CCD and Nolte	California	2008/2011
K. Hovnanian v. Nolte	California	2006/2011
Hanlin v. Penca Capital, Nolte	California	2008/2011
Nuestro School District v. Dauwalder (Nolte)	California	2008/2011
City of Brawley v. Nolte	California	2008/2010
City of Manitou Springs v. Nolte	Colorado	2011/2012

Disclosure

NV5 does not have a conflict with working on the Town's projects. In the event that the Town believes a conflict of interest may exist with any team member, we will consider restructuring the individual team responsibilities wherever possible to eliminate the conflict or, if no other alternative exists, we will drop the member from the team and find a mutually agreeable replacement.