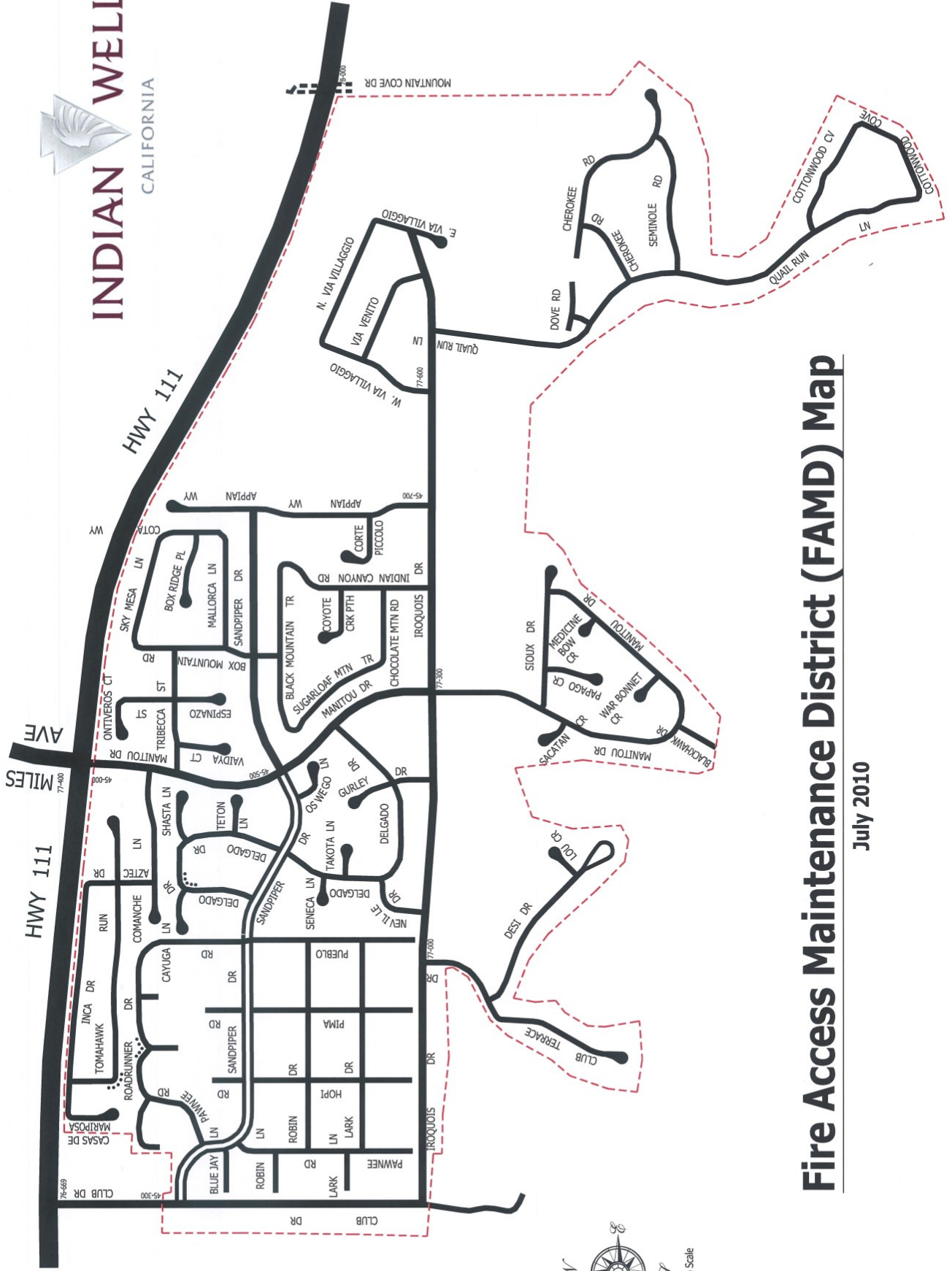




**INDIAN WELLS COUNTRY CLUB COMMUNITY
FIRE ACCESS MAINTENANCE DISTRICT (FAMD) NO. 1**

**BOARD OF DIRECTORS MEETING
February 8, 2024
10:00 A.M.**

This Meeting will be held In-Person at
The City of Indian Wells City Council Chambers
44950 El Dorado Drive Indian Wells, CA



Fire Access Maintenance District (FAMD) Map

July 2010



FAMD #1
Fire Access Maintenance District
An Agency of the City of Indian Wells
Indian Wells Country Club Community

BOARD OF DIRECTORS 2024

Director	Term Ends
Name: Kurt Yeager (Chairperson) Phone: (949) 632-6157 Email: ekurty01@gmail.com	February 28, 2025
Name: Margaret "Marge" Barry (Vice Chair) Phone: (760) 772-0404 or (760) 219-3100 cell Email: iwmarge@gmail.com	February 28, 2026
Name: Open Seat (Secretary) Phone: Email:	February 28, 2025
Name: Tony Trocino (Director) Phone: (760) 610-1751 Email: trotony7@dc.rr.com	February 28, 2026
Name: Steve Nozet (Director) Phone: (925) 698-4632 Email: nozetsteve@gmail.com	February 28, 2025
Name: Dennis Coker (IWCC Rep) Phone: (760) 345-2561 Email: Dennis.Coker@clubcorp.com	Appointed (No Term)



FIRE ACCESS MAINTENANCE DISTRICT NO. 1 INDIAN WELLS COUNTRY CLUB COMMUNITY

Board of Directors Meeting Agenda

February 8, at 10:00 A.M.

**Board will Meet in the City Council Chamber of the
City of Indian Wells at 44950 El Dorado Indian Wells CA**

1. CALL TO ORDER OF THE FAMD, ROLL CALL

Chairman - Kurt Yeager

Vice Chairman – Margaret “Marge” Barry

Secretary – Open

Director - Tony Trocino

Director – Steve Nozet

IWCC Representative – Dennis Coker

2. PLEDGE OF ALLEGIANCE

3. APPROVAL of the FINAL AGENDA

February 8, 2024

Page(s) 4-5

4. PUBLIC COMMENTS

All persons wishing to address the FAMD Board will be called on during this section of the meeting by the Chairman. At the appropriate time, please come forward to the podium and state your name for the record. Speakers are limited to three minutes. Parties are encouraged to submit their comments in writing with any attachments or exhibits they wish for the FAMD Board to review, preferably 24 hours prior to the meeting. Speakers can then use their three-minutes to summarize the key points of their comments. Please note that you may address the FAMD Board on an agenda item at the time it is discussed, but only after being recognized by the Chairman.

Under the Brown Act, the FAMD Board should not take action on or discuss matters raised during the public comment portion of the agenda which are not listed on the agenda. FAMD Board Members may refer such matters to staff for information or to be placed on a subsequent agenda for consideration. Notwithstanding the foregoing, FAMD Board Members and staff may briefly respond to statements made or questions posed during public comment, if such responses do not constitute any deliberation.

5. CONSENT CALENDAR

All matters listed on the Consent Calendar are routine and will be enacted by one vote. There will be no separate discussion of these items unless members of the FAMD Board or audience request that specific items be removed from the Consent Calendar for separate discussion and action. Financial matters will be indicated as budgeted or non-budgeted below.

a. Minutes; January 11, 2024

Page(s) 6-9

b. Financials; January 2024

Page(s) 11

6. SECURITY REPORT

a. January 2024 Security Report

Page(s) 13-16

7. OLD BUSINESS

a. Annual Assessment and Ballot Measure Update

Page(s) Verbal



8. NEW BUSINESS

- a. RFP Review for Drainage Analysis
- b. Appointment of Board of Director Seat

Page(s) 17-96

Page(s) Verbal

9. FAMD DISTRICT MANAGERS REPORT

- a. Priority Three Update
- b. RFP for 5-Year Pavement Management Plan
- c. Electrical Reimbursement Agreement with Sandpiper Cove #3 & Manitou Springs HOA for Bridge Lighting

10. BOARD MEMBERS COMMENTS

11. ANNOUNCEMENTS

Next Meeting March 14, 2024

12. ADJOURNMENT

**INDIAN WELLS COUNTRY CLUB COMMUNITY
FIRE ACCESS MAINTENANCE DISTRICT NO. 1
BOARD OF DIRECTORS OPEN MEETING**

IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, IF YOU NEED SPECIAL ASSISTANCE TO PARTICIPATE IN THIS MEETING, PLEASE CONTACT THE SENIOR BUILDING INSPECTOR OR THE RISK MANAGER AT (760) 346-2489. A 48-HOUR NOTIFICATION PRIOR TO THE MEETING WILL ENABLE THE CITY TO MAKE REASONABLE ARRANGEMENTS TO ENSURE ACCESSIBILITY TO THIS MEETING (128 CFR 35.102.35.104 ADA TITLE III).

AFFIDAVIT OF POSTING

I, Angelica Avila, certify that on February 5, 2024, I caused to be posted a notice of a FAMD #1 Board Meeting to be held on Thursday February 8, 2024, at 10:00 A.M., in person in the City Council Chamber's.



BOARD OF DIRECTORS MEETING

MINUTES **January 25, 2024**

1. CALL TO ORDER

Chairman Kurt Yeager called meeting to order at 10:01 A.M.

ROLL CALL

PRESENT: Chairman - Kurt Yeager
Vice Chairman – Margaret “Marge” Barry
Director – Steve Nozet
IWCC Representative – Dennis Coker

ABSENT: Secretary – Charlie Jones
Director - Tony Trocino

ALSO, PRESENT: District Manager (DM) Scott Matas (Desert Resort Management/ Associa),
Ken Seumalo (City of Indian Wells, Public Works Director),
Kevin McCarthy (Finance Director),
Jill Tremblay (Best, Best & Krieger, City Attorney),
Jennifer Aguilar (City of Indian Wells, Administrative Assistant)

2. PLEDGE OF ALLEGIANCE

3. APPROVAL OF THE FINAL AGENDA

A motion was made by Vice Chair Marge Barry and a 2nd by Director Steve Nozet to approve the agenda for the January 11, 2024, FAMD board meeting. Motion carried 4/0.

4. PUBLIC COMMENTS

No Comments.

5. CLOSED SESSION

- a. Conference with Legal Counsel Regarding Anticipated-Litigation-Initiation of Litigation
Pursuant to Government Code Section 54956.9(d)(4). One (1) or More Cases. Potential Case.
See Closed Session Notes in File – Restricted Information

Recessed to closed session at 10:03 A.M. returned to open session at 10:16 A.M.

6. CONSENT CALENDAR

- a. Minutes; December 14, 2023
- b. Financials; December 2023

A motion was made by Vice Chair Marge Barry and a 2nd by Director Steve Nozet to approve the Consent Calendar. Motion carried 4/0.

7. SECURITY REPORT

a. December 2023 Security Report

Director of Security Paul Stotesbury was absent due to illness. The Board of Directors reviewed the report with no questions.

8. OLD BUSINESS

a. Electrical Reimbursement Agreement with Sandpiper Cove #3 & Manitou Springs HOA for Bridge Lighting

The Board of Directors received a recommended reimbursement of \$600.00 annually for bridge light electrical cost. This amount would be offered to Manitou Springs HOA for the bridge lights on the Manitou bridge and Sandpiper Cove #3 would be offered \$600.00 annually. Manitou Springs HOA is not asking for reimbursement of past years. Sandpiper Cove #3 is asking for reimbursement of past years.

A motion was made by Director Steve Nozet and a 2nd by Director Dennis Coker to approve a reimbursement of \$600.00 annually to Manitou Springs HOA and \$600.00 annually to Sandpiper Cove #3 with an offer to reimburse for the past 3 years. Motion carried 4/0.

b. Report on Street Safety Suggestions

The Board of Directors reviewed recommendations on intersection that are in possible need of safety measures.

A motion was made by Director Steve Nozet and a 2nd by Vice Chair Marge Barry to add intersection safety measures to the next Pavement Management Plan. Motion carried 4/0.

9. NEW BUSINESS

a. Financial Overview and Ballot Measure Consideration

The Board of Directors were given a report by Finance Director Kevin McCarthy.

SUMMARY:

Since 2020, the Fire Access Maintenance District (FAMD) has allocated approximately \$2,100,000, representing about 71% of its cash reserves, towards capital reinvestments within the District. Projections suggest that the FAMD may fall short of meeting the minimum cash-holding requirements stipulated by the City by the conclusion of the fiscal year 2023-24.

The foremost challenge that the FAMD is currently facing is related to the fixed voter-approved assessment, which has remained unchanged for the past 18 years despite any fluctuations in the Consumer Price Index (CPI). Since April 2005, the FAMD has maintained the same assessment of \$1,200,000 for the past eighteen years, as mandated by the voters. This fixed assessment constitutes the principal funding source and accounts for a significant proportion of the total FAMD revenues, amounting to nearly 76%.

While the fixed voter-approved assessment has proven effective during low inflation periods and minimal capital investment, recent developments, such as the need for community reinvestment

in roadway and drainage projects and inflationary pressures on operating costs, necessitate reassessing this fixed amount.

Considering ongoing inflationary concerns, rising operational costs, and the Community's need for infrastructure improvements, the FAMD Board should carefully evaluate potential adjustments to ensure the organization's financial sustainability.

STAFF RECOMMENDATIONS:

Strategic Initiatives for a Ballot Measure

The FAMD Board can consider an informal needs assessment as part of the ballot measure process. A needs assessment is critical for systematically identifying gaps between current conditions and desired outcomes. Through this process, the FAMD Board will comprehensively understand potential service deficiencies. It answers the question: "Why do we need to conduct a ballot measure?"

This informed approach enables efficient resource allocation and strategic decision-making. It fosters stakeholder engagement, enhances accountability, and prevents resource wastage by tailoring interventions to address specific needs. In summary, a needs assessment is valuable for communities to understand, prioritize, and address challenges or opportunities.

The City and the FAMD's Role in the Ballot Measure

Ballot measures allow for direct citizen participation in decision-making, promoting the principles of democracy. This direct engagement can enhance public trust and satisfaction with the political process. The ballot measure can be further broken down into the City's role and the role of the FAMD.

City's Role:

- **Request for Proposal (RFP):** Initiate the process by updating and releasing a comprehensive RFP to solicit proposals from qualified firms with expertise in ballot measures.
- **Firm Selection:** Employ a rigorous evaluation process to identify and engage the most qualified firm, ensuring their proficiency aligns seamlessly with the FAMD's November 2024 Ballot Measure objectives.
- **Oversight and Responsibility:** Assume a proactive role in overseeing the selected firm throughout the ballot measure process, affirming accountability for the successful levy update upon approval.
- **Timeline Establishment:** Develop a viable November 2024 Ballot Measure timeline.
- **Staff Reports and Approvals:** Facilitate the creation of FAMD and City Staff Reports to endorse selecting the best-qualified firm and obtain the requisite approvals for the ballot measure.
- **Recommendation for Fiscal Year 2025-26 Levy Roll:** Propose the initiation of the first new levy in the fiscal year 2025-26 roll, strategically aligning with the financial objectives of the FAMD.

FAMD's Active Involvement and Decision-Making:

- **Board Approval:** Seek formal approval from the FAMD Board to proceed with the RFP process and subsequent firm selection, ensuring alignment with the overall strategic vision.
- **Rationale and Implementation:** Articulate a clear and compelling justification for the necessity of the levy modification, elucidating the implementation strategy and its impact on the district.
- **Levy Adjustment Analysis:** Undertake a thorough analysis of current costs, inflationary factors, and projected capital spending to determine the appropriate levy adjustment. Establish a decision-making process, considering potential political considerations that may necessitate a deviation from the calculated adjustment.
- **CPI Levy Modification Inclusion:** Deliberate on including an annual Consumer Price Index (CPI) levy modification, recommended to keep the levy concurrent with operational increases.
- **Education Campaign:** Spearhead directly or indirectly a robust education campaign elucidating the significance of the proposed measure and its positive impact on the residents residing within the district. Recognizing the pivotal role of strategic communication, a well-executed campaign is imperative to enhance the likelihood of voter approval.

A motion was made by Director Steve Nozet and a 2nd by Vice Chair Marge Barry to support staff's recommendation. Motion carried 4/0.

b. Discussion on whether to proceed with Priority 4 Street Rehabilitation

The Board of Directors reviewed the current financial status of the FAMD and discussed whether to proceed with Priority 4.

A motion was made by Vice Chair Marge Barry and a 2nd by Director Steve Nozet to postpone Priority #4 work and identified what funds are available and what work is necessary. Motion carried 4/0.

c. Discussion on whether to proceed with a remodel of the Manitou guardhouse.

The Board of Directors discussed the financial status of the FAMD and gave direction to the district manager to bring back a proposal for the remodel to review at the next board meeting.

10. DISTRICT MANAGER REPORT

The District Manager reported and answered questions regarding on the progress on the Priority 3 road rehabilitation project, RFP for the street drainage, the RFP for the PMP and Sandpiper 11 request to strip parking areas.

11. BOARD MEMBER COMMENTS

Vice Chair requested a new FAMD map.

12. ANNOUNCEMENTS

The next regularly scheduled meeting of the Fire Access Maintenance District Board of Directors will be held at 10:00 A.M., on February 8, 2024, in person at the City of Indian Wells council chambers.

13. ADJOURNMENT

There being no more business the meeting was adjourned by Chair Kurt Yeager at 11:23 A.M.

YEAR-TO-DATE BUDGET REPORT
JAN 2024

FOR 2024 07

ACCOUNTS FOR:	ORIGINAL APPROP	REVISED BUDGET	YTD ACTUAL	MTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
209 F.A.M.D. #1							
2090000 F.A.M.D. #1							
2090000 411100 CYSecPrpTx	-325,000	-325,000	-136,446.08	-72,627.95	.00	-188,553.92	42.0%
2090000 411200 CYUnsPrpTx	-8,170	-8,170	-9,671.60	.00	.00	1,501.60	118.4%
2090000 411300 PYPrpTx	-2,050	-2,050	-30.11	.00	.00	-2,019.89	1.5%
2090000 411400 RolPrpTx	-1,850	-1,850	-2,698.42	-2,698.42	.00	848.42	145.9%
2090000 421100 Fire Acces	-1,194,000	-1,194,000	-11,533.03	.00	.00	-1,182,466.97	1.0%
2090000 431100 Const Pmt	-1,080	-1,080	.00	.00	.00	-1,080.00	.0%
2090000 451100 Invest Earn	-48,000	-48,000	7,192.00	.00	.00	-55,192.00	-15.0%
2090000 461500 PropTxRelf	-1,830	-1,830	-226.60	.00	.00	-1,603.40	12.4%
2090000 465100 Gr & Reimb	0	0	-15,804.00	.00	.00	15,804.00	100.0%
2090000 486300 Misc Rev	-3,450	-3,450	-1,320.00	.00	.00	-2,130.00	38.3%
TOTAL F.A.M.D. #1	-1,585,430	-1,585,430	-170,537.84	-75,326.37	.00	-1,414,892.16	10.8%
2098601 F.A.M.D. Program							
2098601 531000 Prof Svcs	168,750	168,750	54,135.23	2,155.99	78,301.64	36,313.13	78.5%
2098601 533000 Contr Svcs	996,750	1,096,371	544,909.45	88,758.33	536,445.34	15,016.21	98.6%
2098601 542000 Utilities	32,950	32,950	21,827.00	4,194.72	6,923.06	4,199.94	87.3%
2098601 544000 BldgGrMnt	137,650	132,650	45,011.62	11,434.85	54,520.85	33,117.53	75.0%
2098601 545000 Infrastruc	130,000	127,400	58,865.33	10,113.25	63,134.67	5,400.00	95.8%
2098601 552000 Communicat	18,750	26,250	10,090.58	1,573.67	9,913.08	6,246.34	76.2%
2098601 561000 Office Exp	9,500	9,500	553.41	40.06	8,486.65	459.94	95.2%
2098601 563000 Opr Matrls	1,500	1,600	955.50	136.50	644.50	.00	100.0%
2098601 565000 MinorEquip	2,500	2,500	.00	.00	.00	2,500.00	.0%
2098601 591600 IndrctCost	15,000	15,000	1,250.00	.00	.00	13,750.00	8.3%
TOTAL F.A.M.D. Program	1,513,350	1,612,971	737,598.12	118,407.37	758,369.79	117,003.09	92.7%
2099929 FAMD Capital							
2099929 673100 ConstContr	0	774,241	660,254.00	13,580.00	.00	113,987.00	85.3%
TOTAL FAMD Capital	0	774,241	660,254.00	13,580.00	.00	113,987.00	85.3%
TOTAL F.A.M.D. #1	-72,080	801,782	1,227,314.28	56,661.00	758,369.79	-1,183,902.07	247.7%
TOTAL REVENUES	-1,585,430	-1,585,430	-170,537.84	-75,326.37	.00	-1,414,892.16	
TOTAL EXPENSES	1,513,350	2,387,212	1,397,852.12	131,987.37	758,369.79	230,990.09	
PRIOR FUND BALANCE 6/30/2023:			1,691,981.28				
CHANGE IN FUND BAL - NET OF REVENUES/EXPENSES:			-1,227,314.28				
ENDING FUND BALANCE 01/31/2024:			464,667.00				

FAMD #1

INDIAN WELLS COUNTRY CLUB COMMUNITY

SECURITY REPORT

**Paul A. Stotesbury
Site Security Director
January, 2024**

- January 2 - Tomahawk, H/O reported suspicious person looking over fence, Patrol located was gardener assessing job**
- January 3 - Sandpiper, H/O reported female trying garage doors, Patrol responded unable to locate**
- January 5 - Manitou entrance, accident on Hwy 11 ended up on front entrance planter, no damage, RSO took report, J240050028**
- January 26 - Club Gate, overhead damage, truck with tractor on trailer exited through inside gate and struck overhead, pictures and report to DRM**
- January 26 - Sandpiper, housekeeper stopped by Manitou gate to report possible purse theft, refused report or to call RSO**

FIRE DEPARTMENT/ PARAMEDICS

RESPONSES - 9

TRANSPORTS – 5

RSO

ROUTINE PATROL – 11

CALLS FOR SERVICE – 6

OPEN GARAGE DOOR – 43

OPEN OTHER DOORS – 0

TRANSPONDERS SOLD – 3 (none available)

Indian Wells Country Club FAMD #1

Security Staffing Report

January, 2024

	Employee Name	Length of Service at Allied Universal in Months	Length of Service at IWCCC in Months	Position	Scheduled Work Days	Scheduled Work Hours	Total Scheduled Hours/Day	Total Scheduled Hours/Week
1	Bonner, Betty	18	18	Security Supervisor	Tues/Sat	10pm-6am	8	40
2	Cabanilla, Danny	52	52	Security Officer/Supervisor	Fri/Mon	2pm - 10pm	8	32
3	Casarez, Jose	73	70	Security Officer	Sun/Thurs	2pm-10pm	8	40
4	Gray, Ken	16	16	Security Officer	Mon/Tues	2pm-10pm	8	16
5	Hertwig, Robert	11	11	Security Officer	Thurs/Sun	10pm-6am	8	40
6	Hosamane, Mahinder	124	174	Security Supervisor	Sun/Thurs	10pm-6am	8	40
7	Lara, Marvin	125	122	Security Senior Supervisor	Mon/Sat	6am - 2pm	8	40
8	Mattern, Ian	7	7	Security Officer	Wed/Sun	2pm-10pm	8	40
9	McGarty, Patrick	5	5	Security Officer	Sat-Wed	Varies	8	40
10	Pennington, Sandra	18	18	Security Officer	Fri/Mon	10pm-6am	8	32
11	Penny, Max	23	23	Security Officer	Tues/Sat	2pm-10pm	8	40
12	Perea, Richard	3	3	Security Officer	Sat/Wed	Varies	8	40
13	Perez, Helen	1	1	Security Officer	Wed/Sun	2pm-10pm	8	40
14	Rios, Albert	16	16	Security Officer	Sun-Thurs	6am-2pm	8	40
15	Sandoval, Andrea	81	59	Security Officer	Sat-Wed	6am-2pm	8	32
16	Wright, Shawn	10	10	Security Supervisor	Tues/Sat	10pm-6am	8	40
17								
18	Stotesbury, Paul	101	65	Site Security Supervisor	Mon- Fri	Varies	8	40
19	Part Time(M. Rodriguez)	3	3	Security Officer		6am-2pm	8	16
	TOTALS	657	673					648
	AVERAGES	36.5	37.39					

Change Change

Event	Jan.	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Access Denied	0												0
Alarm Checks-Security	4												4
Animal Control on site	0												0
Animal Issues	1												1
Burglaries	0												0
Thefts	1												1
Garage Doors Open	43												43
A Shift up to 1400 hrs	0												0
B Shift up to 2200 hrs	42												42
C shift after 2200 hrs	1												1
Doors Open (Other)	0												0
Golf Cart Issues	0												0
Homeowner Assist/Welfare Check	9												9
Landscape/Light Issues	0												0
Medical Response / Fire Dept.	9												9
Noise Issues	2												2
Other - Domestic Issue	0												0
Parking Issues	1												1
Public Utility Issue	0												0
Process Servers	0												0
Property Issues/Damage	4												4
Realtor Issues	0												0
Sheriff on Site	17												17
Alarm Response/Call In	6												6
Routine.Patrol	11												11
Suspicious Events	2												2
Traffic/Street Issues	0												0
Vandalism	0												0
Vendor Issues	0												0
Water Issues	3												3

Speed Trailer Data

January, 2024

SPEED TRAILER DEPLOYMENT LOCATIONS

Day	Date	Location	0-20 ●	21-25 ◊	26-30 ◻	31-35 Δ	36-40 *	41-45 x	46-50 *	51+ ●	Total	Time
Fri	SUN	E/B Iroquois										6am-8pm
Sat	MON	S/B Manitou										7am-8pm
Sun	TUE	S/B Club						daily				7am-8pm
Mon	WED	NB Manitou										7am-8pm
Tues	THUR	S/B Club										6am-8pm
Wed	FRI	W/B Iroquois										7am-8pm
Thurs	SAT	N/B Manitou										7am-8pm
Fri	SUN	E/B Iroquois										7am-8pm
Sat	MON	S/B Manitou										6am-9pm
Sun	TUE	S/B Club										7am-8pm
Mon	WED	NB Manitou										6am-8pm
Tues	THUR	S/B Club										7am-8pm
Wed	FRI	W/B Iroquois										
Thurs	SAT	N/B Manitou										7am-9pm
Fri	SUN	E/B Iroquois										7am-8pm
Sat												
Sun												
Mon												
Tues												
Wed												
Thurs												
Fri												
Sat												
Sun												
Mon												
Tues												
Wed												
Thurs												
Fri												
Sat												
Sun												
Totals	App.	Totals										
%		%										

STAFF REPORT

DATE: February 8, 2024
TO: Honorable FAMD Board Members
FROM: FAMD District Manager
SUBJECT: RFP Drainage Analysis

SUMMARY:

The District Manager was directed to send out a request for proposals (RFPs) on a drainage assessment for the Club Terrace, Manitou Springs and Quail Run neighborhoods. The district manager posted the RFP on PlanIT on December 18, 2023, with a deadline for interested parties to return the RFP by January 25, 2024. Attached is the four qualifying RFPs for your review along with a spreadsheet comparing the cost of each firm.

FISCAL IMPACT:

\$65,330.00 (not budgeted)

RECOMMENDATIONS

- Review the RFP's and determine if the cost of the most responsive bidder will accomplish the concerns of the FAMD.
- A supplemental appropriation will need to be approved. Review GL accounts and decide where the funding should be assigned.

FAMD Drainage Assessment - Club Terrace, Manitou Springs and Quail Run											
Compnay	Contact	Date Collection	Hydrology	Existing Sytem Hydraulics	Proposed System Hydraulics	Cost Estimate Report	Project Management	Topo Survey & Mapping	Other	Total	
Michael Baker International	Kyle Gallup	\$ 5,580.00	\$ 12,640.00	\$ 21,160.00	\$ 23,470.00	\$ 5,580.00	\$ 11,820.00	\$ 31,100.00	\$ 2,000.00	\$ 113,350.00	
ERSC	Matt Brudin	\$ 39,890.00		\$ 41,670.00	\$ 21,700.00	\$ 16,570.00	\$ 17,010.00		\$ 1,500.00	\$ 138,340.00	
Kimley-Horn & Associates	Frank Hoffmann	\$ 13,465.00		\$ 25,300.00		\$ 26,565.00			\$ -	\$ 65,330.00	
Q3 Consulting	Tom Ryan	\$ 14,364.00	\$ 5,818.00	\$ 17,006.00	\$ 13,037.00	\$ 9,699.00	\$ 4,400.00		\$ 1,000.00	\$ 65,324.00	

January 25, 2024

Mr. Scott Matas
District Manager
Fire Access Maintenance District #1
Indian Wells Country Club Community
42-635 Melanie Place Suite 103
Palm Desert, CA 92563

Re: Proposal for Street Drainage Analysis

Dear Scott Matas:

Michael Baker International (Michael Baker) is pleased to provide a fixed fee proposal for the preparation of a Street Drainage Analysis for the FAMD #1 Indian Wells Country Club Community, located in the City of Indian Wells within Riverside County, in compliance with the City of Indian Wells Drainage Criteria and the County of Riverside's Hydrology Manual and Hydraulic Design Manual and guidelines.

As the proposal outlines, this request will provide an analysis for storm drain improvements to the existing storm drain systems and provide additional flood protection for the community. The project will evaluate the community's selected drainage areas and determine the capacity and function of all the existing storm drain systems, conveyance channels, and streets. Our team will evaluate the potential options to improve the current drainage systems and provide the Client with an alternative analysis and a recommended approach to satisfy the project and the Client's needs.

This fixed fee proposal includes preparing the analysis of existing drainage facilities within the Indian Wells Country Club Community and recommendations for solutions to the drainage issues in this area. The scope of work is included herein.

If you have any questions, please do not hesitate to contact Kyle at (951) 506-2042.

Sincerely,



Kyle W. Gallup, P.E., CFM
Surface Water Department Manager
Michael Baker International

kyle.gallup@mbakerintl.com

Enclosures:

1) Scope & Fee, 2) Project Team Resumes, 3) Company Proof of Insurance

SCOPE OF SERVICES

TASK 1 DATA COLLECTION, RESEARCH, AND FIELD REVIEW

Michael Baker International (MBI) shall provide engineering services to collect and review background information on all on-site and off-site drainage patterns and facilities. Data collection efforts will include a thorough examination of various sources, including existing drainage and watershed maps, , soil information, "as-built" construction drawings for the existing storm drain facilities, master drainage plans, previous project reports, tentative maps, floodplain mapping, and proposed development plans. MBI will actively communicate with the City / CVWD /County to procure information such as as-builts of existing drainage facilities, streets, adjacent development plans, floodplain documents, topographic data, , and available hydrologic and hydraulic studies. Additionally, MBI will contact CVWD to obtain relevant studies performed in the area, specifically focusing on the Deep Canyon Channel and CVWD's White Water River Channel downstream of the project site.

In addition, a field investigation within the drainage area of the project study will be performed. The field investigation will aim to validate the watershed conditions and accuracy of the as-builts and existing conditions plans. MBI will research and determine information on the existing drainage conditions based on reviewing the existing watershed data and historical flooding data in this area. The existing conditions data will be used to understand the current flooding issues, establish assumptions for the project hydrology, and determine critical locations to develop new drainage systems to mitigate flooding issues where required.

TASK 2 HYDROLOGY

MBI will prepare rational method calculations and/or synthetic unit hydrographs for each of the three study areas to estimate the ultimate peak runoff rates for the 10- and 100-year storm events based on the available mapping of the watershed area (See Attachment A). CivilD hydrology models will be used to develop a link-node model to determine flow rates at the various concentration points of the site and determine the peak flow rates of surface runoff to downstream facilities. Synthetic Unit Hydrograph will be used for watersheds larger than 300 to 500 acres or for sizing regional drainage facilities such as detention basins. Hydrographs will also be utilized for two-dimensional modeling within the golf course channels that will help identify and locate the current flooding issues based on the existing topography.

This task will include preparing and submitting a hydrology report to the Client based on the information gathered in task 1; if no mapping is available, aerial topography will need to be flown to identify and analyze the watershed boundaries. Additionally, MBI will compare hydrology results with historical storm data or previous studies available during this proposal's data collection and research task. Hydrology maps will be prepared to delineate the watershed boundaries, nodes, flow paths, points of concentration, and existing drainage facilities. The hydrology maps will identify critical locations of concentrated flow and areas susceptible to flooding. Hydrology calculations will conform with the Riverside County Flood Control's Hydrology Manual and the City's Drainage Criteria. Calculated hydrology results will be compared with available existing drainage studies that are applicable to the study area.

TASK 3 EXISTING DRAINAGE SYSTEM HYDRAULICS

MBI will conduct a preliminary hydraulic analysis of the existing conveyance system capacity and function. All accessible as-built drawings and previous studies will be reviewed to understand the intent of the current existing storm drain systems. The analysis will determine the capacity of all existing storm drains, culverts, open channels, and streets. The preliminary hydraulic analysis will be based on evaluating the water surface or the hydraulic grade line of the existing drainage systems for the 10- or 100-year storm event. Hydraulic grade line (HGL) calculations will be performed utilizing the Los Angeles County Water Surface and Pressure Gradient (WSPG), HEC-RAS, OpenFlows FlowMaster, Hydraflow Express, or a similar program acceptable to the City/County. The hydraulic model developed as part of this task will provide the baseline model to identify system deficiencies and to test the various alternatives of the recommended storm drain improvements. The water surface data and hydraulic information for each watershed area or element of the facility will be summarized in tabular format to allow for easy review.

To augment the analysis, MBI will perform a two-dimensional analysis using a HEC-RAS 2D model to identify the golf course channel capacities and their capability to convey the flood waters. The analysis will require topographic mapping that will be collected in Task 1. The overall analysis will determine the function of all the existing storm drain systems, the efficiency of the current systems, and any locations where the existing systems are deficient. It is assumed for this task that topographic mapping of the watershed is available and water surface analysis exists for the downstream conveyance channels known as Deep Canyon Channel and CVWD's White Water River Channel. Alternatively, MBI will utilize the existing FIS studies to determine the water surface elevations of the existing conveyance channels if such models are unavailable. If no topographic mapping is available, an addendum to procure aerial topography will be required to execute the abovementioned analysis.

The task will include the development of a draft preliminary hydraulic report to be reviewed by the Client. The final hydraulic report will be developed in the subsequent task and will include a summary of the existing hydraulic analysis of the drainage system and assumptions.

TASK 4 PROPOSED DRAINAGE SYSTEM HYDRAULICS

MBI will develop alternative analyses to improve flooding issues of the existing storm drain systems for each of the three (3) areas. New or upgraded conveyance systems will be implemented in vulnerable areas where concentrated runoff is identified to be the highest and where the existing storm drain systems are deficient at safely conveying runoff from those areas to the regional stormwater channels. The conceptual assessment will focus on mitigating flooding issues using three options: increasing the hydraulic capacity by enlarging existing storm drain facilities, a diversion system such as a channel or swale, detention storage for runoff reduction, or a combination of these options.

The overall watershed system will be divided into three (3) smaller study areas to determine solutions unique to each sub-area of the watershed. MBI will prepare exhibits with potential design options that address flooding issues and any constraints associated with the alternatives that will be discussed. A feasibility analysis will be performed to review the options and develop a recommendation of alternatives

based on selection criteria, including reducing costs and minimizing public impacts. MBI will review the alternatives with the Client to determine the best-fit approach for the project and the Client's needs.

Preliminary horizontal alignments will be developed for the storm drain facility alternatives. The lengths and elevation data will be used for hydraulic analysis and cost estimation. The recommended drainage systems used to mitigate hydraulic deficiencies of the watershed areas will be analyzed using water surface profile models (WSPG). The final sizing of the upgraded storm drain systems will be adjusted using the water surface profile model to optimize the system's performance.

This task includes preparing a hydraulic study to summarize the alternative analysis and the recommended systems, which the Client and the City/County will review. One set of revisions of the hydraulic study will be commenced based on the Clients' and City/County's comments. The study will reference the methodology, design assumptions, guidelines, and criteria for identifying and evaluating drainage alternatives and determining storm drainage needs and priorities.

TASK 5 COST ESTIMATE FOR PROPOSED DRAINAGE SYSTEMS

MBI will prepare preliminary construction cost estimates to identify feasible drainage alternatives. The preliminary construction cost estimate will be generated from the quantity estimate using the latest approved unit cost sheets from Riverside County Flood Control. Additional costs for alternative systems include excavation, structural fill, land acquisition, street paving, traffic control, and utility relocation or protection. A cost for each watershed area and project alternative will be provided.

TASK 6 PROJECT MANAGEMENT, COORDINATION, AND PROCESSING

MBI will organize a kick-off meeting to initiate the process for preparation of the analysis. This meeting aims to discuss the existing flooding issues, identify any remaining data needs required to complete a thorough hydrologic and hydraulic analysis, concur project goals and objectives, and process an overall schedule. An essential purpose of the meeting will be to clearly define the Client's expectations for the planning process and primary goals for the analysis. MBI proposes an early mobilization of the literature/records search and field review to facilitate the development of a project description with sufficient detail to support the notice of preparation.

MBI will attend meetings and provide consulting services for the Client and other agencies as directed by the Client during each task identified above. MBI will coordinate and attend progress meetings with the Client, prepare meeting agendas and minutes for the meeting, and update project schedules. The meetings will review the work progress and provide direction regarding the development study. The scope also includes coordination with various agencies, as required. If additional work is required exceeding this amount, then it will be completed through a contract addendum agreed to by the Client. For the purpose of estimation, we have included 16 hours for each employee.

TASK 7: TOPOGRAPHIC SURVEY & AERIAL MAPPING

MBI reviewed and researched available mapping and found topographic data of the southern mountain range useful for drainage analysis toward the golf course and homes. However, MBI believes it is required to procure additional mapping of the golf course areas and existing streets to perform an effective drainage study that is helpful in proposing drainage solutions for this area. Aerial mapping will be required for the three (3) project areas as shown in Exhibit A (within the orange dash line) and will terminate to the east in Area 3 along Mountain Cove Drive.

Michael Baker shall prepare an Aerial Topographic Map of the project site with one-foot contour intervals. The work shall include:

- Preparation of a flight plan and layout of ground control targets;
- Field surveying services to set ground control panels and survey their precise positions on the appropriate coordinate system basis;
- Aerial photogrammetric and aero triangulation services;
- Compilation of planimetric and topographic features to digital medium;
- Perform field survey check profile observations and office analysis of said observations to check the ground truth of the compiled map within accepted standards.

In addition to the Aerial Topographic Survey mentioned above, Michael Baker shall perform a supplemental field topographic survey to show more detailed information as needed by the engineering team to facilitate drainage infrastructure planning. The survey will be used to identify the locations and elevations of existing features and site elevations. The results of this survey will be compiled as CADD files to be used by the design team.

At this time, we are budgeting 24 hours of a 2-man survey crew and 12 hours of office support for this task. Additional hours if needed will be included in a separate agreement.

ADDITIONAL SERVICES: Services not explicitly identified herein as services to be performed by MBI or its consultants are considered "Additional Services" for purposes of this Agreement. The Client may request that Michael Baker perform Additional Services. However, Michael Baker is not obligated to perform such Additional Services unless an amendment to this Agreement has been fully executed setting forth the scope, schedule, and fee for such Additional Services. In the event, MBI performs Additional Services before receipt of such executed amendment. In that case, the Client acknowledges its obligation to pay for such services at Michael Baker's standard rates within 30 days of receipt of Michael Baker's invoice.

EXCLUSIONS:

Consulting services relating to any of the following tasks may be completed by Michael Baker if negotiated under a separate contract for an additional fee but are presently explicitly excluded from this Agreement:

1. Topographic Surveys
2. Preparation of improvement plans or specifications.
3. Non-Drainage Utility Locations.
4. Water Quality Analysis.
5. Environmental documentation or processing.
6. Geotechnical Engineering.
7. Structural Engineering.
8. Construction Support.
9. Construction Management.
10. Any other services not explicitly set forth in the above Scope of Services.

OWNER RESPONSIBILITIES:

1. The Client shall provide access to the site.
2. The Client will require any construction contractors to indemnify Michael Baker from all losses, damages, claims, and expenses, including attorney's fees and costs arising out of the contractor's work, excepting only losses, damages, claims, expenses, including attorney's fees, and costs which are caused by the sole negligence or willful misconduct of Michael Baker in performing its services under this agreement. The Client will require that the construction contractors add Michael Baker as an additional insured in the comprehensive general liability, auto liability, workers' compensation, and builder risk insurance coverages required by the Client.
3. The Client is to provide all indemnification, abatement, disposal, or other actions required by local, state, or federal law regarding hazardous materials.

Client Initials _____

Date _____

COMPENSATION AND PAYMENT

Michael Baker shall complete the work outlined above per the fee schedule identified below and invoice the Client monthly based on the completion percentage. Client agrees to compensate Michael Baker for such services as follows:

WORK TASKS:

ITEM	DESCRIPTION	FEE
Task 1:	Data Collection, Research, and Field Review.....	\$5,580
Task 2:	Hydrology	\$12,640
Task 3:	Existing Drainage System Hydraulics	\$21,160
Task 4:	Proposed Drainage System Hydraulics.....	\$23,470
Task 5:	Cost Estimate for Proposed Drainage Systems.....	\$5,580
Task 6:	Project Management, Coordination, and Processing	\$11,820
Task 7:	Topographic Survey & Aerial Mapping	\$31,100
	Other Direct Costs (ODCs).....	\$2,000
		Total Fee: \$113,350.00

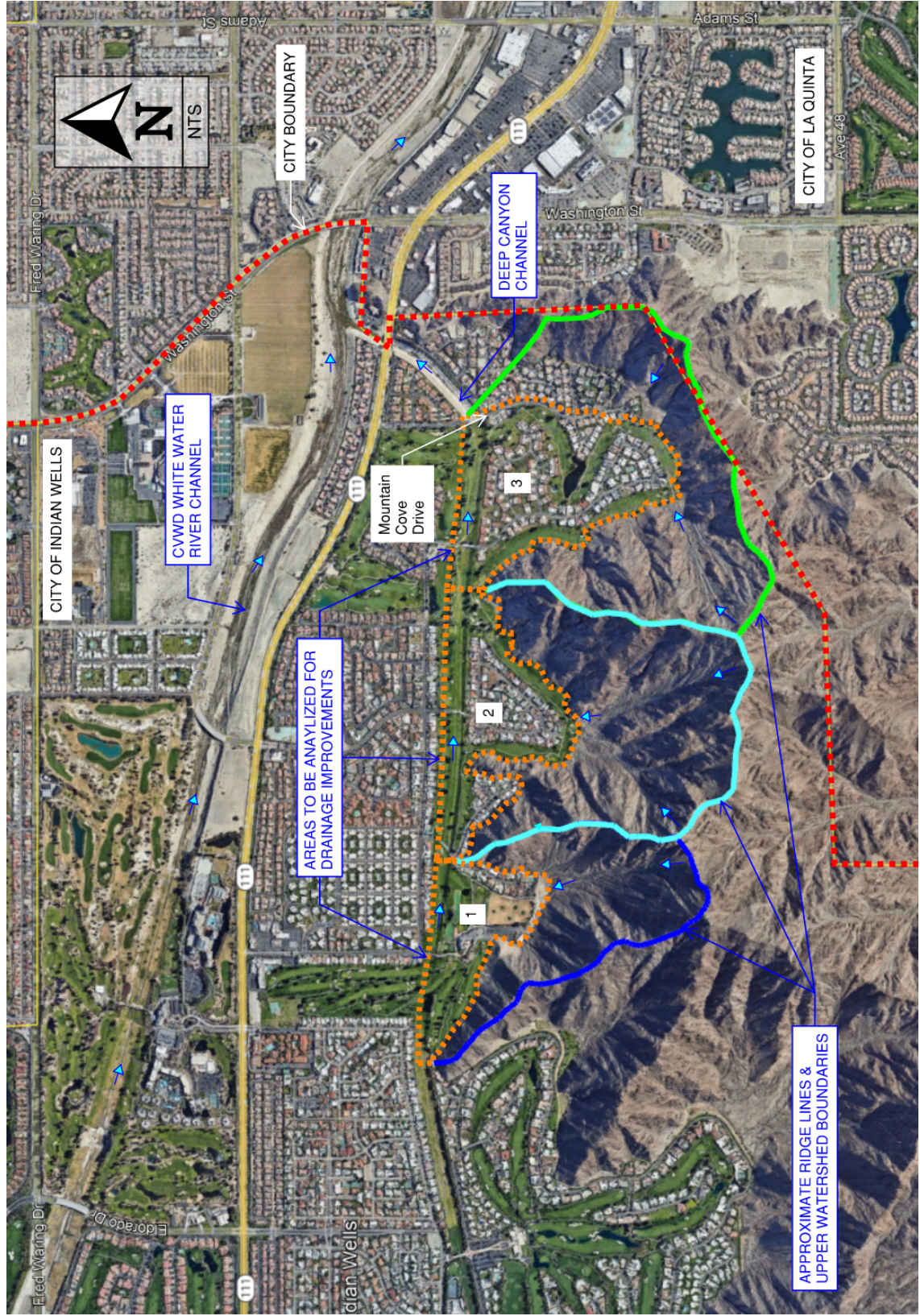
Progress billings will be forwarded to the Owner monthly. These billings will include the fees earned for the billing period plus all direct costs advanced by Michael Baker.

The client shall make every reasonable effort to review invoices within fifteen (15) working days from the date of the receipt of the invoices and notify Michael Baker in writing of any item alleged to be incorrect.

The fees proposed herein shall apply until December 31, 2024. Due to ever-changing costs, Michael Baker may increase those portions of the contract fee for which work must still be completed after December 31, 2024, by ten percent (10%).

The Client (FAMD #1 Indian Wells Country Club Community) and Consultant (Michael Baker International), for a mutual consideration hereinafter set forth, agree as follows: The Consultant agrees to perform the following services.

ATTACHMENT A - WATERSHED STUDY AREAS



Kyle Gallup, P.E., C.F.M.

Mr. Gallup has experience in water resources engineering with an emphasis in planning, design, and construction of flood control facilities, water conservation, and floodplain management. His experience includes drainage design and planning, hydrology, area and master drainage plans, erosion protection, stormwater management, roadway drainage, floodplain studies and mapping, hydraulic modeling analysis, and floodplain mapping review. He is familiar with hydrologic and hydraulic modeling methodologies and computer programs including HEC-HMS and HEC-RAS 1 and 2D.

RELEVANT EXPERIENCE

Chief of Operations and Maintenance, Riverside County Flood Control & Water Conservation District. March 2023–May 2023

Division Manager in charge of overall maintenance of the agency's drainage infrastructure, right of way, buildings and fleet. Maintenance responsibly included weed abatement, restoring as-builts lines and grades of drainage systems, rodent control, fleet repair and utilization. Administered emergency repair contracts for levees, channels and storm drains with emergency on-call contractors. Responsible for over 60 staff in the Division.

Engineering Project Manager (EPM)/Senior Civil Engineer, Riverside County Flood Control and Water Conservation District. March 2011 – March 2023

District liaison for floodplain management, water conservation/quality, planning and design projects with cities, counties, businesses, property owners, stakeholders, and consultants. Responsible for the development of staff's engineering knowledge. As a leader, provided staff with the tools they needed to be successful including assisting with their development by scheduling numerous trainings on topics covering MicroStation, InRoads, asphalt, structures, specifications, levees, geotechnical, GeoHEC-RAS, and water quality.

The following list provides details of my lead roles as EPM/Sr. Engineer:

Planning Manager (EPM), Riverside County Flood Control. August 2020–March 2023

Project Planning Lead Engineer. Responsible for the oversight of master drainage plan (MDP)/area drainage plan (ADP) updates and development, ADP fee credits, District's budget process, hydrology studies, research for drainage inquiries, and investigating and resolving flooding issues throughout the county.

Floodplain Manager (EPM), Riverside County Flood Control. December 2017–August 2020

Lead Engineer for the Floodplain Management Section. Supported Riverside County Building & Safety Director (Floodplain Administrator) in administering the National Flood Insurance Program (NFIP) for the unincorporated area in Riverside County. Main responsibilities included maintaining good standings with FEMA's NFIP, oversee the Community Rating System program, CLOMR/LOMR review and approval for commercial and residential developments, prioritizing and analyzing floodplain revisions, levee certifications, dam inundation studies, reviewing and approving individual building flood applications, Department of Water Resources (DWR) and FEMA audits, Enforcing County Ordinance 458 which regulates special flood hazards and implements the NFIP, regulating FEMA, DWR, District's Special Study Floodplains.

Watershed Protection Manager (EPM), Riverside County Flood Control. June 2015–December 2017

Lead Engineer for the Watershed and Water Conservation Planning Section. Responsible for oversight of water quality/conservation projects for all watersheds within District jurisdiction, Lake Elsinore/Canyon Lake TMDL, and the Middle Santa Ana River TMDL. Developed, determined planning cost, and organized water conservation projects.

Michael Baker INTERNATIONAL

Years of Experience

18

Education

B.S., 2005, Civil Engineer, San Diego State University

B.A., 2000, Business Administration, Grossmont College

Licenses/Certifications

Professional Engineer - Civil, California, 2009, 74610

Certified Floodplain Manager, 2018, US-18-10783

Water Treatment Operator, T1, 2023, 46140

Water Distribution Operator, D1, 2023, 53919

Conferences

(FMA) Annual Conference, 2018, 2019, 2020, 2021, 2022

Contract Administrator (Senior Civil Engineer), Riverside County Flood Control. March 2014–July 2015

Lead Engineer responsible for administering the contract documents to build flood control drainage systems. Oversaw the construction of the following projects (construction cost): North Norco Channel Stage 10 (\$1.0 M), West End Moreno MDP Line LL (\$1.0 M), and Temescal Creek Foster Road Storm Drain (\$1.7 M).

Tasks performed as a Contract Administrator were as follows: Bring disputes to a resolution regarding construction conflicts, approve and stamp "as-built" drawings, negotiate change orders, manage inspection consultants, lead preconstruction meetings, enforce plans and specifications, and coordinate with outside public agencies.

Design Project Manager (Senior Civil Engineer), Riverside County Flood Control. March 2011–June 2015

Lead Engineer responsible for the development of the plans and specifications for an array of flood control projects throughout Riverside County. Oversaw the design of the following projects: Palm Canyon Wash Levee Restoration Stage 90 and 91, Day Creek Channel Stage 6, Orange Street Storm Drain Lateral, Spirit Knoll Court Storm Drain, Norco Lateral N-1D, Arroyo Del Toro Channel, San Jacinto Line C, C-4, C-5 & B, North Norco Channel stage 11, Valle Vista Chanel Extension, Banning MDP Line D-2 and D-2a, Temescal Creek Foster Road Storm Drain, Hemet Line D Stage 7, Norco Laterals NA-1 & NA-1A, and El Cerrito Channel Restoration.

During the design phase, planned, organized, directed, and reviewed the work of the staff engineers and consultants. The planning consisted of the development of a multiyear project schedule that was laid out and tracked in a Microsoft Project. Organized routine meetings with in-house staff and outside agencies to keep the projects moving forward to completion. Directed and reviewed staff engineer and consultant calculations, costs, plans and specifications.

Associate Civil Engineer, Contract Administrator, Riverside County Flood Control. April 2009–March 2011

Created ongoing schedule for the inspection staff to observe developer and city-funded projects and encroachment permits. Enforced plans and specifications for developer, city, and District projects. Administered preconstruction meetings for developer-funded projects. Assisted developers with the maintenance acceptance process. Coordinated with local pipe manufacturers for D-load testing. Evaluated change order claims for District projects. Reviewed and approved concrete mix designs, compaction reports, and as-built drawings.

Assistant Engineer, Designer, Riverside County Flood Control. September 2007–April 2009

Determined mainline storm drain horizontal and vertical alignment. Performed hydrologic and hydraulic design analysis for mainline and inlets. Designed traffic control and paving plans. Coordinated utility relocations. Calculated the designed facility pay item quantities. Wrote and edited specifications for contract documents.

Assistant Engineer, Planner, Riverside County Flood Control. February 2006–September 2007

Revised MDPs and ADPs for Riverside County. Developed new MDP for Lakeland Village (Lake Elsinore Area). Plan checked hydrology/hydraulic studies for new development. Researched various studies of hydraulics and hydrology to design drainage facilities. Calculated debris/attenuation basin size for MDPs. Designed and estimated cost for proposed drainage facilities. Designed porous landscape detention basins standards for District's WQMP manual. Updated the District's unit cost for planning fiscal year budget.

Junior Engineer, Planner, Riverside County Flood Control. February 2005–February 2006

Performed required analysis to update and generate MDPs /ADPs. Reviewed submittals of MDP/ADP revisions submitted by developers and city engineers. Prepared preliminary analysis/design/cost estimates for projects submitted for consideration in yearly budget process. Prepared ADP fee credit estimates according to the District's rules and regulations. Received, investigated, and resolved flooding complaints. Answered counter calls and public requests for information regarding MDP/ADP plans and facilities.

Computer Skills

CivilDesign – Hydraulic (WSPG), Hydrology (rational and synthetic unit hydrograph), Routing Programs
HEC-HMS
HEC-RAS 1D and 2D Modeling
GeoHEC-RAS
Microsoft Office
Microsoft Project

Todd Pitner, P.E., QSD/QSP

Surface Water Project Manager

Mr. Pitner is a California registered Professional Civil Engineer with over 25 years of progressively responsible work experience with extensive knowledge in all aspects of civil engineering. Mr. Pitner's area of expertise is hydrology, hydraulics and storm drain design with emphasis on water quality mitigation measures associated with new development and redevelopment to include residential, highway, industrial, commercial facilities and municipal facilities, to comply with the regulatory requirements under the National Pollution Discharge Elimination System (NPDES) permit.

Mr. Pitner has designed and overseen the construction of notable projects throughout Southern California which incorporate low impact development and green infrastructure to minimize the adverse impacts on storm water runoff quality and quantity resulting from urban development. Designed treatment control systems include infiltration basins/trenches, bioretention features, detention basins, underground storage, infiltration areas, constructed wetlands and various types of proprietary treatment devices to comply with local MS4 Permits.

Mr. Pitner, as a Qualified SWPPP Developer, is familiar with the regulatory compliance requirements of the Construction General Permit for both LUP and traditional projects. As the QSD for over 50 SWPPPs, Mr. Pitner has extensive experience with SWPPP preparation, SMARTS filing and preparation of permit registration documents (NOI, risk assessment, site maps), amendments throughout construction, NOT's, training and the management/oversight of construction activities to ensure compliance.

City of Murrieta On-Call Civil Engineering Services (March, 2022 to Present) Surface Water Project Manager
Provide plan review of various submittal packages processed through the city to include, but not limited to, grading, street, storm drain plans. Supporting documentation also reviewed includes, but not limited to, water quality management plans, hydrology and hydraulic studies and geotechnical reports.

County of Riverside Transportation Department, (June 2017 – Present) Surface Water Project Manager
Provide plan review services of WQMP and Hydrology Reports associated with new development and significant redevelopment projects, and plan check services for private development projects.

Coachella Valley Association of Government (CVAG) Flood and Blowsand Analysis (February 2020 – December 2021) Surface Water Project Manager

Conducted technical studies of watersheds tributary to regional roads in the Western Coachella Valley that are at risk during severe flood and blow sand events. Report identified risks at each area of concern and outlined the potential mitigation of those risks, considering potential environmental impacts and project permitting that would be required along with a budget level estimate including design, ROW, Permitting, Construction, and other costs associated with the mitigation. Alternative concepts were identified, developed, and evaluated for each area of concern. Stakeholders included Riverside County Flood Control, City of Palms Springs, City of Desert Hot Springs, and Cathedral City.

Years with Michael Baker: 7

Years with Other Firms: 25

Degrees

B.S., 1995, Civil Engineering, San Diego State University

Licenses/Certifications

Professional Engineer - Civil, California, 1998, 58606

Professional Engineer - Civil, Arizona, 2011, 52406

Professional Engineer – Civil, Nevada, 2018, 025719

Real Estate Broker License, 0186420

Qualified SWPPP Developer (QSD), California, 00550

Pechanga Parkway Widening Project, (February 2018 – December, 2018) Surface Water Project Manager

Prepared project specific Water Quality Management Plan for compliance with Regional Municipal Separate Stormwater Sewer System (MS4) Permit. Project component included offsite alternative compliance mitigation measures, as designed for compliance with USEPA Green Street Guidance document.

Southern California Edison, Storm Water Compliance Support, (October 2015 to December 2019)

Surface Water Project Manager. Prepare, review, and provide on-going management of Storm Water Pollution Prevention Plans (SWPPP) for numerous projects throughout Central and Southern California for project compliance with the Construction General Permit, adopted Order No. 2009-0009-DWQ. Management duties include review, coordination and oversight of Qualified SWPPP Practitioners, provide quality review/assurance of all inspection reports and perform Qualified SWPPP Developers responsibilities. Quarterly site assessments conducted to ensure monitoring and reporting program and site conditions are in compliance with the SWPPP.

Non-Michael Baker Project Experience**Southern California Edison Tehachapi Renewable Energy Transmission Project (TRTP), Southern California.**

Senior Project Engineer. Prepared, reviewed, and amended Storm Water Pollution Prevention Plans (SWPPP) for project compliance with the Construction General Permit, adopted Order No. 2009-0009-DWQ. Conducted site-specific training and routine inspections for compliance with the State Water Regional Board requirements. SWPPP development activities included site-specific risk assessments, preparation of permit registration documents (including Notice of Intent utilizing the on-line permitting process), BMP design and evaluation, and implementation of the monitoring and reporting program.

NRG El Segundo Power Redevelopment Project El Segundo, California. Project Engineer. Oversaw the Water Pollution Control Program for the demolition of two generating units and the construction of two gas-fired combustion turbine/generators and support facilities. As the Qualified SWPPP Developer (QSD) and Qualified SWPPP Practitioner (QSP), implemented all aspects of the Water Pollution Control Program including routine on-site training for site personnel, site inspections to identify potential sources of pollutant run-off, BMP recommendations and testing for compliance with the project Numeric Effluent Limitations for conformance with the State Water Regional Board Construction General Permit and Industrial Permit.

Pelican Hill Resort, Newport Beach, California. Project Engineer. Provided engineering and design services for this ocean view resort consisting of a golf club facility, hotel complex (lobby, meeting rooms, events center, restaurant, pool and spa), Guest Suites (204 units and other associated appurtenances), Upper Casitas (13 buildings with a total of 52 units) and Lower Casitas (76 units and a recreation facility). Performed feasibility and technical studies to analyze the project infrastructure and design a state of the art, Water Quality Management Plan consisting of underground retention cisterns to provide storage of storm water for golf course irrigation and groundwater recharge. (Storm drain, domestic and reclaimed water, sewer, water quality). Coordinated and designed the construction plans with team members to include mass grading, street, water, sewer, storm drain and precise grading.

Dana Point Headlands, Dana Point, California. Project Engineer. Provided engineering and design services for this 121-acre, hillside, development, consisting of 75 single family dwellings on the Strand Portion of the property and 50 single-family dwellings along the upper portion of the site; each pad with an ocean view. Performed hydrology and hydraulic analysis, designed and prepared storm drain and water quality construction plans to include diversion structures, vertical drop energy dissipaters, sewer diversion of storm water and below ground, filtration water quality structures. Structural BMPs were designed in accordance with the requirements of the California Regional Water Quality Control Board for New Development and Redevelopment, consisting of sewer diversion structures and filtration treatment systems prior to discharging into the environmentally sensitive coastal waters.

Montage Resort, Laguna Beach, California. Project Engineer. Provided engineering and design services for this 30-acre, ocean development adjacent to the Pacific Coast Highway (PCH) consisting of a 100-key resort hotel with meeting rooms, spa facilities and 97 private luxury villas. Performed hydrology and hydraulic analysis, storm drain design incorporating water quality structures, grading (mass and precise), and street design including on-site and PCH modifications. The watershed included approximately 30 acres of off-site area, in addition to the site, which was treated for pollutant removal prior to discharging into the environmentally sensitive coastal waters.

Pacific/Laurel Storm Drain Reconstruction, Elm Avenue Reconstruction, and Bell Avenue Detention Basin, Manhattan Beach, California. Responsible for providing civil engineering, topography survey, and construction staking for the street and storm drain rehabilitation project. The scope of services included street pavement reconstruction, replacement of deteriorated storm drain pipes, and the design of a retention basin within a park site to reduce flooding in a residential neighborhood. Prepared final street plans, specifications, and estimates for this street rehabilitation project to improve Elm Avenue, Pine Avenue, Walnut Avenue, and 19th Street. The scope of work for the detention basin consisted of a hydraulic analysis of the existing storm drain system and a hydrology analysis of the watershed to determine the level of protection currently provided.

MacArthur Boulevard and Red Hill Intersection Improvements, Irvine, California. Responsible for providing civil engineering, design, landscape architecture, and surveying services for this intersection expansion project. The scope of services included the preparation of street, traffic, storm drain, sewer, and water plans. Additional services included right of way acquisition assistance, the design of additional through and turn lanes, channel modification/improvement, curb relocation, and preparation of landscape concepts to restore theme planting removed for improvements. The widening of MacArthur Boulevard involved the expansion of a triple box culvert crossing which is under the jurisdiction of the Orange County Flood Control District. As a condition of the project, the existing trapezoidal, earthen channel was engineered to increase the flood control capacity to convey the flow generated from a 100 year storm event, while preserving the soft-bottom channel. This was accomplished by converting the trapezoidal channel to a U-shape section with the use of retaining walls varying in height from 15 to 22 feet. The improved channel has the capacity to convey the 100 year storm while preserving the natural channel bottom for water quality enhancements.

Rincon Village Community Facilities District, Chino Hills, California. Responsible for the final design, utility coordination, and overseeing the construction surveying of 11,100 linear feet of domestic and reclaimed water pipelines from 16 inches to 24 inches in diameter, 6,000 feet of 12-inch trunk sewer, which serves 1,500 residential units and 60 acres of commercial development and the planning, coordination and design of a concrete lined channel, which conveys flows in excess of 1,000 cfs into the Prado Dam Reservoir. Rincon Village Community Facilities District Project consisted of a \$20-million infrastructure improvement project that included upgrading an intersection at State Route 71, a water reservoir, a sewage lift station, a trunk sewer, two miles of 24-inch water pipeline, and a concrete lined storm drain channel.

Alexander P. Svecz, P.E.

Mr. Svecz serves as an assistant project manager who specializes in water resources projects. He provides design, planning, and coordination for transportation, utility, and land development projects. His experience includes civil plan production, wet utility layout, hydrologic & hydraulic analyses, site grading, permit approval, cost estimation, and construction inspection. He has worked on various types of engineering projects including public improvement projects, private land development projects, airport projects, utility design layouts, stormwater facility design, street improvements, bridge projects, and design-build projects. He has comprehensive experience designing hydrologic and hydraulic conveyance systems using civil engineering design software and modeling with Civil 3D.

His strength includes his supplemental experience in construction and various work experiences such as creating engineering estimates, technical memorandums, floodplain impact studies, value engineering projects, developing construction details, and preparing specifications. His experiences equip him with problem-solving skills and the ability to see the finer details to better prepare construction plans.

Michael Baker INTERNATIONAL

Years with Michael Baker

1

Years of Experience

6

Education

B.S.C.E., 2017, Civil Engineering/Environmental Engineering, Rowan University

Licenses/Certifications

Professional Engineer - Civil, Colorado, 2025, 60377

Conferences

(FMA) Annual Conference 2023

RELEVANT EXPERIENCE

West Side Master Drainage Plan, Hemet, California. *City of Hemet.* Michael Baker provided engineering services for the preparation of the Master Drainage Plan (MDP) for the area to the west of the limits covered by the existing plan. The project included mapping of the proposed storm system for the study area and production of storm drain GIS layers; a full hydrology model; and an analysis of the existing system with recommendations for future capital improvement projects in keeping with low-impact development, NPDES considerations, and downstream capacity restrictions. Alex is responsible for assessing and developing alternative analyses for storm drain design in the Winchester area of western Hemet. The analyses include evaluating the existing storm drain infrastructure and preparing potential alternatives to provide additional conveyance capacity to reduce the areas of flooding and connect these facilities to the existing regional storm drain conveyance systems that collect the 100-year storm event.

Flood and Blowsand Road Improvements Phase 1, Palm Springs, California. *Coachella Valley Associations of Government (CVAG).* Assistant Project Manager. Michael Baker implemented road improvements along a 1.6-mile portion of Indian Canyon Road, which supports potential habitat for the burrowing owl for a project located in the city of Palm Springs, Riverside County, California. Alex is responsible for the development of the roadway drainage design and reports of Indian Canyon Drive. His role also included the design, analysis, and layout of the storm drain system for Indian Canyon Drive over the Whitewater River Channel.

Ontario Master Plan Drainage, Ontario, California. *City of Ontario.* Assistant Project Manager. Michael Baker is providing professional services to update the city of Ontario's drainage master plan. The project scope includes updating data inventory for the storm drain geographic information system (GIS), updating hydrology and hydraulics based on the 2050 General Land Use Plan, performing a capacity study to determine where storm drains are deficient or where new storm drains should be installed to reduce flooding, and developing a prioritization procedure to rank and incorporate improvement projects into the city's capital improvement plan. Alex was responsible for assisting and developing of the storm drain analysis for the various storm drain main and laterals to be implemented and up-sized throughout the City. Alex was also included in the QA/QC process of the analysis.

Warner Trail Improvement Project, Indian Wells, California. *City of Indian Wells.* Assistant Project Manager. Michael Baker is under contract with the City of Indian Wells to provide professional engineering services related to the Warner Trail Improvement Project. The primary purpose of this project is to provide multi-modal improvements which include ADA-compliant paths of travel, pavement rehabilitation, storm drain repair, and landscaping. Alex's role included preparing alternatives for the existing storm drain repairs and presenting the various alternatives to the City. Alex was responsible for preparing the storm drain improvement plans, details, and technical specifications for the project.

Rancho Mirage Hiking Trails, Rancho Mirage, California. *City of Rancho Mirage.* Assistant Project Manager. Michael Baker International has been contracted to develop an alternatives analysis and feasibility study to install potential sidewalks, crosswalks, and/or additional hiking trails along Frank Sinatra Drive west of Highway 111. The project will provide additional pedestrian facilities to complete the loop of Road Runner

Trail, Big Horn Overlook Trail, and Jack Rabbit Trail. The team evaluated various alternatives, including potential enhanced pedestrian crossings as well as sidewalks/decomposed granite trails through the area to facilitate safer pedestrian use of the trail. Alex's role includes coordinating meetings with the City to discuss the various project alternatives. His role includes reviewing title reports and easements along the roadway and determining the feasibility of implementing pedestrian paths and roadway crossing. He is responsible for developing various project alternatives to enhance pedestrian safety and interconnect the trail system along Frank Sinatra Drive.

Centinela Bike Pump Track Project, Inglewood, California. *Velosolutions.* Assistant Project Manager. Michael Baker, partnering with Grow Cycle Foundation, provided design and engineering services to develop a bike pump track for Edwin Vincent Park. The track is an asphalt paved, closed loop track, consisting of undulating rollers, banked turns, and features to enhance the play experience, serving a wide range of age groups and non-motorized wheeled vehicles (bicycles, scooters, etc.). The track will be inset two feet below grade with a starting platform height of two feet above grade. For the project, Michael Baker prepared precise grading plans, drainage plans, and a low-impact development plan. Alex is responsible for the development of the design, construction drawings, and cost estimate. His role also included the design and layout of the storm drain system and on-site water quality BMPs.

Amargosa Creek Recreational Trail Project, Lancaster, California. *City of Lancaster.* Alex served as a Design Engineer for the Amargosa Creek Recreational Trail Project. The project is to design and construct a 2-mile bike and pedestrian trail (Class I Facility) along Amargosa Creek from Avenue H to Avenue J. Michael Baker has been contracted to prepare concept plans, a preliminary design, and the environmental document. The project includes an alternative analysis for each of the three trail-crossing locations. Alternatives studies include bridge overcrossing and at-grade crossing options including HAWK signals or RRFBs with lane reconfiguration and bulb-outs. The trail itself will be a shared-use path with a landscaping buffer which will serve as a water quality treatment device and enhance the aesthetic of the trail. Alex is responsible for preparing storm drain plans for the replacement and relocation of various city storm drains and catch basins due to the impacts of the project.

NPDES Services and On-Call Agreement, Murrieta, California. *City of Murrieta.* Assistant Project Manager. Michael Baker provides plan check reviews for the City of Murrieta Public Works and Engineering Department. The reviews ensure entitlement phase and development phase projects comply with local regulations, California Building Code and NDPES MS4 permit requirements. These services include reviewing grading plans, street improvement plans, WQMPs, hydrology reports, storm drain plans and project cost estimates. Alex was responsible for plan checks of water quality management plans, hydrology reports, and rough grading plans for new and redevelopment projects in the City of Murrieta. Alex was also responsible for plan reviews of water quality management plans and hydrology reports for entitlement phased projects. His role included coordinating with City Staff and Design Engineers for the subject projects to meet local compliance for development.

Water Quality Management Services On-call, Riverside County, California. *County of Riverside.* Assistant Project Manager. Michael Baker is providing on-call engineering services for plan checks of water quality management plans for new developments and redevelopment projects. Plan-check services include plans for street improvements, striping, utility coordination, street lighting, grading, and other improvement plans per the Riverside County Department of Transportation's plan-check policies and guidelines. Alex was responsible for plan checks of water quality management plans, hydrology reports, and rough grading plans for new and redevelopment projects in the County of Riverside. His role included coordinating with City Staff and Design Engineers for the subject projects to meet local compliance for development.

Previous Work History

HCL Engineering & Surveying, LLC, Denver, Colorado. Civil Engineering - Project Engineer, July 2021–September 2022

My primary role was the project engineer of land development projects for various clients throughout the Denver, Colorado Metro area from July 2021 to September 2022. I have been working independently with guidance from the Senior Project Managers (PM) to develop civil plans, prepare hydrologic & hydraulic designs and write reports for permit approval. I have grown with the company to begin independently managing projects with guidance of the PM. I have gained additional experience aiding the PM's in managing projects and employees, creating change orders, writing scopes and developing proposals. Projects consist of sanitary sewer design, storm sewer design, utility layout, airport improvement projects, hydrologic and hydraulic analysis, roadway design, roadway drainage, ROW improvements, erosion control measures, and value engineering. The role required communication and meetings with various agencies for permit/project approvals including local cities and counties throughout the Denver metro area, MHFD, DEN, and CDOT. Project coordination included designing the property to optimize the space and use available while maintaining regulatory compliance.

Engineering Resources of Southern California Inc., Redlands, California. Civil Engineering - Design Engineer II, May 2019—May 2021

I was employed as a Design Engineer II with a focus in Hydrology and Hydraulics from May 2019 to May 2021. In the role I worked as the design engineer on capital improvement projects for various cities throughout the inland empire of Southern California. I worked independently with guidance from the Project Managers to develop detailed construction plans, prepare hydrologic and hydraulic analyses and create reports and plans for permit approval. Projects consisted of geometric roadway design, roadway drainage, street improvements, channel

improvements, bridge design, BMP implementation, and designing storm drain facilities per local guidelines. The role required communication and meetings with various agencies for permit/project approvals including Cities, flood control districts, FEMA, CALTRANS, USACE, CDF&W, and the Regional Water Quality Control Board. Worked with the senior engineers in managing projects, creating change orders, and writing project scopes. Additional experience included using HEC-RAS to model channel hydraulics and prepare scour analyses for the bridge piers with the reach. My role began with completing engineering design tasks with guidance from the Professional Engineer. My role progressed to managing projects and staff while coordinating design concepts with clientele, and local agencies.

BANC3 Engineering Inc., Princeton, New Jersey. *Land Development - Design Engineer I; Construction Manager, May 2017—April 2019*

I was employed with BANC3 engineering as a Design Engineer I from May 2017 to April 2019. The role consisted as the design engineer of land development projects for various clients throughout New Jersey. I worked independently with guidance from the Project Managers to develop construction plans, prepare hydrologic and hydraulic designs and prepare design reports with design calculations for permit approval. The projects consisted of designing the property to optimize the space available for the best value to the client while maintaining regulatory compliance and minimizing impact. I worked on different types of engineering designs including water quality treatment facilities, stormwater control facilities, roadway and traffic improvements, landscape architecture, and value engineering. I also had additional experience as a Construction Manager for a government entity. Became familiar with organizing and hosting bi-weekly meetings, correspondence with parties involved in construction, and performing weekly field observation reports of construction progress. The chronology of job experience started with drafting plans and taking direction from the PE, then to working independently on tasks with supervision from the PE, then to working independently on projects managing tasks with guidance from the PE. Lastly, I gained experience managing construction projects within a governmental building to meet building code requirements.

Continuing Education/Training

Health and Safety Orientation, 9/28/2022

Storm & Sanitary Analysis Simplified In Civil 3D, 6/3/2022

Computer Skills

AutoCAD Civil 3D

HEC-RAS

WSPGW

CIVILD

Microsoft Office



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
08/18/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Aon Risk Services Central, Inc. Pittsburgh PA Office EQT Plaza ~ Suite 2700 625 Liberty Avenue Pittsburgh PA 15222-3110 USA	CONTACT NAME:	
	PHONE (A/C. No. Ext): (866) 283-7122	FAX (A/C. No.): (800) 363-0105
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
INSURED Michael Baker International, LLC, 500 Grant Street Suite 5400 Pittsburgh PA 15219 USA	INSURER A: XL Insurance America Inc	24554
	INSURER B: Allied world Surplus Lines Insurance Co	24319
	INSURER C: American Guarantee & Liability Ins Co	26247
	INSURER D: Zurich American Ins Co	16535
	INSURER E:	
	INSURER F:	

Holder Identifier :

COVERAGES**CERTIFICATE NUMBER:** 570101187716**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
D	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:			GLO419728102	08/30/2023	08/30/2024	EACH OCCURRENCE	\$2,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$1,000,000
							MED EXP (Any one person)	\$10,000
							PERSONAL & ADV INJURY	\$2,000,000
							GENERAL AGGREGATE	\$4,000,000
							PRODUCTS - COMP/OP AGG	\$4,000,000
							SIR/Deductible	\$250,000
D	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			BAP-4197284-02	08/30/2023	08/30/2024	COMBINED SINGLE LIMIT (Ea accident)	\$2,000,000
							BODILY INJURY (Per person)	
							BODILY INJURY (Per accident)	
							PROPERTY DAMAGE (Per accident)	
							Deductible	\$100,000
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$10,000			AUC053258205	08/30/2023	08/30/2024	EACH OCCURRENCE	\$10,000,000
							AGGREGATE	\$10,000,000
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	WC419728202 AOS WC419728502 WI	08/30/2023	08/30/2024	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER	
D					08/30/2023	08/30/2024	E.L. EACH ACCIDENT	\$1,000,000
							E.L. DISEASE-EA EMPLOYEE	\$1,000,000
							E.L. DISEASE-POLICY LIMIT	\$1,000,000
B	E&O - Professional Liability - Primary			03124806 Claims Made SIR applies per policy terms & conditions	08/30/2023	08/30/2024	Per Claim Aggregate SIR/Deductible	\$5,000,000 \$5,000,000 \$200,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Evidence of Insurance.

CERTIFICATE HOLDER**CANCELLATION**

Michael Baker International, LLC 500 Grant Street, Suite 5400 Pittsburgh PA 15219 USA	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE <i>Aon Risk Services Central, Inc.</i>

Certificate No : 570101187716



Proposal to Provide Engineering Services for Street Drainage Analysis

Submitted: January 24, 2024

January 24, 2024

Fire Access Maintenance District #1
42-635 Melanie Place Ste 103
Palm Desert, CA 92211

Attn: District Manager Scott Matas

RE: Engineering Services - Street Drainage Analysis

Dear Mr. Matas,

Engineering Resources of Southern California, Inc. (ERSC) was formed in 1996 and, since its formation, has been committed to serving Special Districts, Regional Agencies, and Municipalities in Southern California's public sector. Our 28-year service record is a testimony to the quality of services we provide. Many of our clients continue to seek our services and have done so since our first year of business. ERSC has also developed significant financial resources and organizational efficiencies that allow us to consistently exceed client expectations.

Over the past 28 years, ERSC has proudly provided myriad engineering services to public agencies in Southern California. Delivering a wide range of services, our team has been instrumental in the planning, design, and construction of drainage infrastructure and public facilities serving local agencies and the public.

ERSC is actively engaged with several local governments and special districts in the Coachella Valley. Clients and representative projects include:

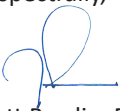
- City of Palm Desert
 - o Section 29 Basin Repairs
 - o Haystack Channel Rehabilitation
- City of Palm Springs
 - o Master Plan Storm Drain – Lateral 6a
 - o Master Plan Storm Drain – Line 8
 - o Master Plan Storm Drain – Line 20c and Lateral 20ca
 - o Master Plan Storm Drain – Line 20
 - o Ramon Road Drainage Improvements at the Baristo Channel
- City of Indio
 - o Jackson Street Squash Box
- City of Cathedral City
 - o East Cathedral Creek Chanel Improvements
- Coachella Valley Water District
 - o Bermuda Dunes Area Drainage Study

For many years, ERSC has provided drainage and flood control engineering to public agencies. We have been a part of facilitating the betterment of infrastructure and facilities each agency has experienced. Our team has the kind of understanding of procedural and environmental requirements that only comes with long-term experience working with public agencies and municipal governments.

ERSC has enjoyed a long and successful history of working with public agencies throughout the Coachella Valley. We look forward to building a similar and enduring partnership with the Fire Access Maintenance District.

If you have any questions regarding the content of this proposal, please contact me at your convenience.

Respectfully,



Matt Brudin, P.E., QSD
Principal

Project Understanding & Scope of Services

Project Understanding

While preparing this proposal, ERSC reviewed available documentation and conducted a site review to gain insights into the issues this project must resolve. These efforts provided valuable information used to develop our understanding of the issues facing the neighborhoods being evaluated and the facilities currently providing flood protection.

Fire Access Maintenance District No. 1 (FAMD) – Indian Wells Country Club has issued a Request for Proposals seeking a drainage analysis of three neighborhoods: Club Terrace, Manitou Springs, and Quail Run. Each is distinct in layout and supports varying levels of single-family residential homes along private streets.

Drainage patterns in each neighborhood are dictated by street layout, proximity to the adjoining foothills, and the golf course. The Club Terrace Neighborhood is surrounded on three sides by steep foothills that appear to produce uncontrolled runoff. The Manitou Springs and Quail Run neighborhoods benefit from the golf course on three sides, as it appears to create a buffer between the steep slopes of the adjoining foothills and the residential areas.

An initial field investigation by ERSC indicates the primary method of conveyance is street flow. While each neighborhood has drainage improvements, these improvements are typically located at the entrance to each neighborhood, along the southerly most streets, and are limited in scope. In more detail, the existing drainage improvements include:

- Club Terrace – Catch basins located mid-block on both sides of Desi Road and a single catch basin in the cul-de-sac on Lou Circle. Both locations drain northerly to the golf course.
- Manitou Springs – Catch basins (3) located at the intersection of Manitou Drive and Sioux Drive and a single catch basin on the north side of Sioux Drive at Manitou Drive. Each location drains to the golf course. Drainage in Manitou Springs is supplemented by dead storage basin and inlet works located on the south end of Blackhawk Drive.
- Quail Run – Catch Basins on Quail Run Lane, a grated inlet southwest of the roadway, a trench drain along the northeasterly side of the roadway, and a catch basin on the north side of Cherokee Road. Each location drains to the golf course.

In August 2023, Tropical Storm Hilary produced large amounts of rainfall across Southern California. This event prompted the Board of Directors of the FAMD to pursue an assessment of the existing drainage systems in the three neighborhoods discussed above. In limited conversations with FAMD staff, we learned the drainage systems in Manitou Springs and Quail Run did not function properly during this storm. Further, FAMD staff has indicated their belief that the drainage system in Quail Run may be failing.

Considering information obtained from the FAMD, limited field observations, and similar projects, ERSC has developed an approach to the requested analysis that involves the following major tasks.

- Data Research and Field Observation.
- Baseline Conditions.
- Proposed System Upgrades.
- Master Drainage Plan.

Each task will result in the preparation and submittal of Technical Memorandum outlining analysis and calculations, model outcome, and conclusions and recommendations for each phase of project development. The final result is the synthesis of each previous Technical Memorandum into a Master Drainage Plan for each neighborhood.

The development of the major tasks and detailed scope of work presented herein are based on these two significant assumptions:

1. Record drawings, including grading plans, street improvement plans, and storm drain plans, will be made available for review and analysis.
2. Analysis of the Manitou Springs and Quail Run neighborhoods will include an analysis of runoff from the adjacent foothills and golf course drainage.

The detailed scope of work provided below includes optional services that account for missing data should the record drawings not be available. Further, if FAMD staff determines that the analysis of offsite runoff and golf drainage for the Manitou Springs and Quail Run neighborhoods are unnecessary, these tasks can be eliminated from the project, and appropriate fee adjustments will be provided.

Scope of Services

Data Research and Field Observation

Record Data – Prepare and submit written requests for record data and as-built drawings from the City of Indian Wells, Fire Access Maintenance District No.1 - Indian Wells Country Club, and the Indian Wells Property Owner Association. Acquire, review, and catalog maintenance and inspection records from the noted sources if available. Review record data and identify and summarize existing drainage improvements in a spreadsheet by location, size and type, maintenance history, flow patterns, street widths, and associated improvements.

Field Observation

Visit each neighborhood - Club Terrace, Manitou Springs, and Quail Run - to verify the content of the record drawings, including the size, type, and location of drainage improvements, flow patterns, and street improvements. Expand the content of the spreadsheets

prepared during the review of Record Data with field measurements, field sketches of the existing system layout, verification of the size of various system components, verification of past maintenance activities, and a general assessment of the condition of each system.

Technical Memorandum

Prepare a summary and documentation of the type and content of the record drawings, content, and activities included in maintenance reports, overall drainage concept, drainage system components, and a condition assessment of the various system components.

Optional Task

Field Surveys – In the event the listed record drawings are unavailable or limited by type, conduct field surveys necessary to provide horizontal and vertical data required to provide proper hydraulic analysis of the existing drainage systems, including locating catch basins and system outlets and determining flowline and invert elevations for inlets, storm drains, and system outlets.

Baseline Conditions

Base Maps

Using data gathered during Data Research and Field Observations or other available sources, map each neighborhood and offsite tributary areas for use during development of runoff calculations and development of potential system alternatives. Mapping will include surface improvements and the location of existing drainage improvements.

Hydrology Study

Prepare hydrology calculations for the rate of runoff generated from offsite and onsite areas adjoining and within the three neighborhoods being analyzed. Runoff calculations for each location in the study area will be developed using methods outlined in the Riverside County Flood Control and Water Conservation District Hydrology Manual. Runoff associated with 100-year return frequency storms for offsite areas and 10- and 100-year return frequency storms for onsite areas will be prepared using the rational method.

Runoff for each neighborhood will be analyzed as follows:

- Club Terrace – Offsite and onsite areas.
- Manitou Springs – Offsite areas, golf course drainage, and onsite areas. Analysis of Manitou Springs will include the development of runoff volume using Synthetic Unit Hydrograph calculations for the 1-, 3-, 6-, and 24-hour duration, 100-year return frequency storm for use during the analysis of the dead storage basin located at the end of Blackhawk Drive.
- Quail Run – Offsite areas, golf course drainage, and onsite areas.

Hydraulic Calculations

Using regionally accepted methods, prepare hydraulic calculations to determine the capacity of existing catch basins and storm drain systems detailed in the Project Understanding. In Manitou Springs, develop a stage/storage/discharge curve based on basin inlet geometry and basin configuration and prepare basin routing calculations showing how the basin performs during a controlling rain event.

System Assessment

Considering the outcome of the hydrologic and hydraulic models, prepare an assessment of drainage structures, streets, catch basins, and storm drains, which provide conveyance of stormwater in the three neighborhoods. The assessment will be based on industry-standard street flow criteria and criteria associated with catch basin and storm drain design. If applicable, it will consider impacts to existing infrastructure, private property, and the golf course.

Technical Memorandum

Prepare a summary of site hydrology indicating the maximum runoff at concentration points significant to the analysis of existing drainage systems, summarize street drainage and storm drain design criteria, analyze street drainage, and identify areas where street drainage criteria are exceeded. Document and summarize the overall drainage concept, the capacity of the various system components, and probable impacts on existing infrastructure and private property in each neighborhood and the golf course surrounding Manitou Springs and Quail Run.

As part of the Manitou Springs area, include discussion of the capacity and function of the components for the dead storage basin located at the end of Blackhawk Drive.

Proposed System Upgrades

System Development

After evaluating street drainage and capacity and the condition of the existing infrastructure, develop options for system upgrades that minimize the potential for street flooding within the project area. Options are limited and will focus primarily on subsurface drains connected to catch basins where street capacity is exceeded. Where opportunities are present, Manitou Springs and Quail Run retention facilities will be considered to reduce the magnitude of downstream facilities. Prepare preliminary profiles for subsurface drains and schematic design for any proposed basins.

Hydraulic Calculations

Prepare hydraulic calculations to determine the size and capacity of proposed catch basins and storm drain systems included as part of the proposed system upgrades. Verify and maximize the design of the proposed systems. If applicable in Manitou Springs and Quail

Run, develop stage/storage/discharge curves based on schematic basin inlet geometry and configuration and prepare basin routing calculations showing how proposed basins perform. If the basins are effective, re-evaluate and downsize the downstream storm drain system(s) based on basin outflow.

Technical Memorandum

Author documentation of the proposed systems and their analysis. Topics will include discussion of localized drainage issues, system options and descriptions, hydraulic design criteria, hydraulic performance, and overall effectiveness related to the elimination of localized flooding.

Final Report

Master Drainage Plan

Compile all previous Technical Memoranda into a final report in the form of a Master Drainage Plan (MDP). The MDP will include an executive summary, introduction, discussion of the project setting, breakdown and analysis of record data and field observations, explanation of the baseline condition and overall drainage system, and proposed options for system upgrades. Appendices will include preliminary profiles and schematic designs, and conceptual-level construction cost estimates.

Cost Estimates

Prepare conceptual level construction cost estimates using preliminary profiles and schematic designs as the basis. Materials costs will be based on planning-level data from the Riverside County Flood Control and Water Conservation District.

Project Management and Meetings

Schedule and attend meetings as noted below:

- Kick-Off Meeting
- Present Data Research and Field Observation Technical Memorandum
- Present Baseline Conditions Technical Memorandum
- Discuss System Upgrade Opportunities
- Present System Upgrades Technical Memorandum
- Present Master Drainage Plan

Provide project management, monthly progress reports, and coordination with the FAMD and Indian Wells Property Owners Association through the planning and design process.

Fee Estimate & Project Schedule

Fee Estimate

Our fees for the proposed services are estimated as follows:

Record Data and Field Observation

Record Data.....	\$11,640
Field Observation	\$7,620
Technical Memorandum	\$2,110
Field Survey (Optional Task)	\$18,520
Subtotal	\$39,890

Baseline Condition

Base Maps.....	\$7,580
Hydrology Calculations.....	\$13,620
Hydraulic Calculations	\$13,650
System Assessment	\$2,940
Technical Memorandum	\$3,880
Subtotal	\$41,670

Proposed System Upgrades

System Development	\$10,110
Hydraulic Calculations	\$7,710
Technical Memorandum	\$3,880
Subtotal	\$21,700

Final Report

Master Drainage Plan.....	\$9,130
Cost Estimates	\$7,440
Subtotal	\$16,570

Project Management and Meetings.....\$17,010

Subtotal **\$17,010**

Reimbursable Expenses.....\$1,500

Total..... **\$138,340**

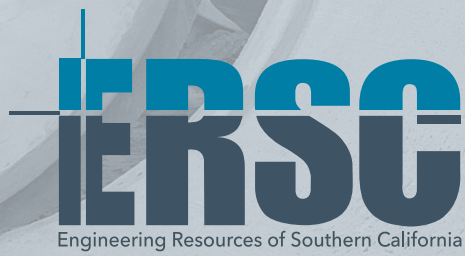
Tasks labeled “Optional” are included in the total fee for authorization. Any task labeled “Optional” will only be included in the project with prior authorization from the FAMD.

Project Schedule

A milestone schedule for completion of the requested services is presented below.

Street Drainage Analysis – Project Schedule			
Task Description	Start Date	End Date	Calendar Days
Record Data/Field Observation	March 4, 2024	April 1, 2024	29
Baseline Conditions	April 8, 2024	June 3, 2024	56
Proposed System Upgrades	June 10, 2024	July 8, 2024	29
Final Report	July 15, 2024	August 12, 2024	29

“Project Management and Meetings” is an ongoing task for the project’s duration. In addition, a more detailed project schedule will be provided and discussed during the Kick-Off Meeting.



Street Drainage Analysis

Cover Letter

January 25, 2024

Scott Matas
District Manager/FAMD #1 Indian Wells Country Club Community
Fire Access Maintenance District #1
42-635 Melanie Place Ste 103
Palm Desert, CA 92211

RE: Fire Access Maintenance District #1 – Proposal for Street Drainage Analysis

Dear Mr. Matas and Members of the Selection Committee:

The **Fire Access Maintenance District #1** (FAMD#1) needs a team with local knowledge and expertise to assess the street drainage within the Indian Wells Country Club community. **Kimley-Horn** has assembled a team that provides civil engineering services with high expectations and exceptional client commitment. We are confident that our highly qualified, local team offers the right balance of project management and technical experience to meet your needs. We offer the FAMD#1 the following benefits:

We Know the City. We have had the pleasure of partnering with the City of Indian Wells by providing on-call design engineering services for many years. Through this contract, we have worked on the Annual Asphalt 2021 Washington Street PS&E Services and Rehabilitation of Washington Street; the Indian Wells Golf Resort Sidewalk Improvements; the Indian Wells Golf Course Topographic Survey; the Miles Avenue Bridge Repair; and the Highway 111/Casa Dorado Driveway Safety Improvements.

A Local and Diverse Team with the Backing of a National Firm. We have a local office in Coachella Valley, where our project manager and longtime Coachella Valley resident, **Frank Hoffmann, P.E.**, is based. He has the local knowledge and expertise to provide on-call civil engineering services and has access to the firm's wider experience and technical resources from across the state of California and the United States. Our dedicated team regularly works together on similar on-call contracts, allowing us to immediately begin work on task orders without having to establish new lines of communication.

Extensive Street Drainage Analysis Experience. Drainage studies require highly technical analysis and can be improved by incorporating specialized software and models. Kimley-Horn has access to state-of-the-art hydrologic and hydraulic modeling software such as GeoHEC-HMS and StormCAD to ensure the integrity of results. Our team has experience utilizing these software programs for street improvement and feasibility studies to ensure that local standards are being met and risk is being mitigated for future storm events.

If you have any questions, please contact project manager Frank Hoffmann, P.E. at **760.610.0819** or at frank.hoffmann@kimley-horn.com.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Frank Hoffmann, P.E.
Project Manager

Street Drainage Analysis

Contents

Cover Letter	1
Proposal	2
Firm Experience	2
Project Understanding	11
Project Approach	12
Schedule	15
Fee and Expenses	17

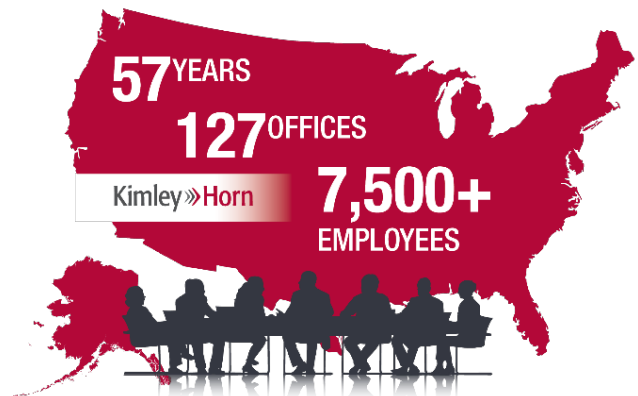
Proposal

FIRM EXPERIENCE

Firm History

Kimley-Horn is a full-service engineering, planning, and environmental consulting firm providing services to public and private sector clients nationwide. Since our founding in 1967, Kimley-Horn has grown from a small group of traffic engineers and transportation planners to a firm of over 7,500 employees in 127 offices nationwide, including 12 in California. Our continued growth and stability over the past 57 years is the direct result of our commitment to integrity and dedication to providing quality services to our clients.

Work for this project will be led out of our local Coachella Valley office by project manager and primary point of contact **Frank Hoffmann, P.E.**



According to **Engineering News-Record**, our firm ranks 9th overall among the nation's top 500 design firms

Firm Qualifications and Experience

Kimley-Horn has been providing planning and engineering services to public agencies for 57 years, 35 of which have been spent serving California clients. We are well-equipped to address the aspects of this project and see it through successful completion. On the following pages, we have highlighted our broad experience in areas relevant to this project. Specific examples of our project experience have been provided in the **Relevant Project Experience** section of this proposal.

Relevant Services Offered



Drainage Analyses and Improvement Projects

Kimley-Horn brings extensive Drainage Analyses experience consists of the successful completion of multi-disciplined capital improvement projects including the design of box culverts, urban drainage systems, roadway drainage crossings, bridges, engineered channels, alluvial channels, flood control basins, stormwater pump stations, and water quality best management practices. Our approach highlights technical elements that are unique to the design of flood mitigation and how site-specific physical, engineering, and environmental constraints are likely to impact the direction of our work. Our experience encompasses hydrologic studies and drainage reports for a holistic understanding of drainage projects.

Street Drainage Analysis



Civil Engineering and Design

Civil engineering forms the backbone of our qualifications to serve as your consulting engineer. At Kimley-Horn, we have experienced professionals in roadway, site development, utility engineering, stormwater management, site/retaining walls, and hydraulic/hydrologic modeling, among others. We have the in-house capabilities to provide you with the civil engineering needs you may have. Our depth of resources means you will benefit from experienced professionals who practice civil engineering for public-sector clients every day.



Utility Coordination

Utility coordination is an integral element in the design and implementation of a drainage improvement project and a service that Kimley-Horn can provide in-house for this project. Every project is unique and presents its own special design challenges; however, the most frequent challenge we face in local municipal projects is related to existing utilities. Kimley-Horn believes in drawing all utility lines and features to their true size in our plans to aid in identifying conflicts early in the design phase, potholing potential conflict locations when budgets allow, and extensive coordination with the various utility companies.



Bidding and Construction Support

Kimley-Horn routinely serves clients during construction phases of their project, providing bidding and construction support services to make sure our clients' projects are successful throughout. We can assist in preparing and distributing bid documents for the FAMD#1, review contractor bids, and prepare bid tabulation and contractor recommendations. Although our aim is to prepare a plan set that can stand by itself, we will respond to contractor requests for information and clarification in a timely manner. Our experience with construction contract administration has made our traffic and transportation designs more cost-effective and practical and gives us the ability to problem-solve in the field during construction.

Project Management Qualifications and Experience

Schedule and Budget Control

Our goal as partners to FAMD#1 staff is to keep you informed on the status of your projects. Based on our clear understanding of the scope of work and budget for each task order, we will prepare a detailed schedule that includes milestones for interim deliverables and the overall task. **To keep the fast-paced schedule for this project on track, we recommend setting up bi-weekly, online project team meetings to monitor progress and track action items.** Kimley-Horn's internal management information system (MIS) tracks effort and performance by recording time spent and percent of project tasks completed. Twice monthly, MIS produces a Project Effort Report, which shows the actual effort expended by task. This allows us to make timely adjustments as reasonably necessary to maintain schedules and stay within budget. Cost control is achieved through two independent processing systems integrated into the MIS, providing a complete financial and reporting overview of each individual task as well as the entire project. Task managers receive detailed status reports twice each month. This level of tracking controls task budgets, allowing us to keep our clients fully informed of the administrative aspects of each task.

Quality Control and Quality Assurance

Since its founding, Kimley-Horn has aggressively pursued its commitment to quality for every task, deliverable, and service provided by the firm. Recognizing the importance of careful quality control, Kimley-Horn developed a quality control and quality assurance (QC/QA) manual that every project manager is required to know and use. We strive for our procedures to facilitate the delivery of high-quality services that satisfy your needs. There will be no learning curve relative to quality for the Kimley-Horn team.

Our QC/QA program will include the review of project documents and supporting data by our task managers and key staff who will direct individual tasks. This program will include the following procedures:

Street Drainage Analysis

- The task manager will be responsible for being thoroughly familiar with requirements and will be given the authority to direct the project team and call upon our corporate resources, as reasonably necessary, to satisfy the project needs
- An internal “kick-off” meeting will be held with key individuals assigned to the task to clearly define the scope of services and establish the schedule
- Project meetings and decisions will be documented by a “paper trail.” All documents will be supported by appropriate data that will clearly show the choices evaluated and the basis for our recommendations
- Supporting calculations, text, or data used to develop a document will be signed and dated by the individual involved when the services are performed. Additionally, telephone conversations and meetings that include or affect a project decision will be documented

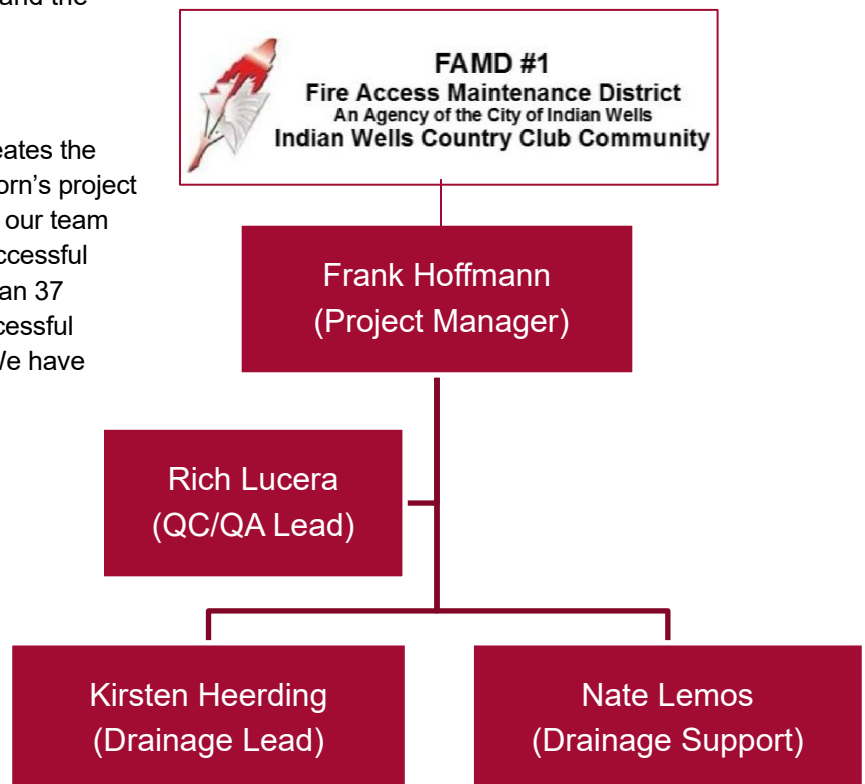


PROJECT TEAM PERSONNEL, QUALIFICATIONS, AND EXPERIENCE

Kimley-Horn knows that when you choose a consulting firm, you are really choosing the people who will bring you technical knowledge, hands-on experience with similar projects, and a commitment to timely, first-rate deliverables and client service. The proposed Kimley-Horn team has a history of successfully completing projects and a proven track record of providing each assignment focused attention regardless of size. Our project team is unsurpassed in local knowledge and relevant experience and has been structured to provide strong support to the FAMD#1 and the District Manager.

Organizational Chart

The organizational chart on the right delineates the roles and responsibilities of both Kimley-Horn's project team and our subconsultant staff. Notably, our team will be led by **Frank Hoffmann, P.E.**, a successful Kimley-Horn project manager with more than 37 years of specialized experience in the successful delivery of capital improvement projects. We have also included resumes for our key staff starting on page 7.



Street Drainage Analysis

RELEVANT PROJECT EXPERIENCE

City of San Diego, Chollas Creek Watershed Plan Upstream of 48th Street, San Diego, CA

Excessive flooding in a sump location of the Chollas Creek Watershed is of high flood risk concern for the City of San Diego. The City requested that Kimley-Horn provide hydrologic and hydraulic analysis of a storm drain realignment within 48th Street to mitigate this flood risk. Kimley-Horn's scope included field reconnaissance, the development of planning level design alternatives, and a constructability analysis. Kimley-Horn's investigation of the existing drainage system, using data collected from City GIS sources and field visits, identified deficiencies extending 3,000 ft upstream of the proposed realignment. Kimley-Horn used the modeling software StormCAD to perform hydrologic and hydraulic modeling of the existing drainage network and assess flood mitigation provided by each proposed alternative design. This model incorporated data collected for topography, land use, and soil



types in the study area. The modeling results were compiled into a stormwater report which summarized the watershed characteristics, modeling approach, and impacts of the alternative designs on flood risk mitigation. Along with these designs, permitting, constructability, and operational issues were addressed. Potential funding options were explored, and the Federal Emergency Management Administration (FEMA) was identified as the most relevant funding source due to the flood risk mitigation components of this project.



KEY FEATURES:

- ✓ Data gathering and records review
- ✓ Drainage asset investigation and assessment
- ✓ Hydrologic and hydraulic analysis
- ✓ Stormwater report

San Jose International Airport, Flood Hazard and BMP Analysis, San Jose, CA

Kimley-Horn was hired by the Mineta San Jose International Airport (SJC) to investigate the feasibility of constructing large-scale regional stormwater treatment to comply with Municipal Regional Permit Provision C.3 for low impact development (LID). Kimley-Horn collected data over the 1,050 acre site for the existing drainage network, topography, and impervious area. This data was incorporated into PC SWMM models, which are being used to perform hydrologic and hydraulic analysis of existing stormwater flows, future growth flow scenarios, and offer potential implementation of LID mitigation measures. The PC SWMM models incorporate



varying tailwater/submergence effects of Guadalupe River and calibrated pollutant transport for a water quality assessment by applying field data from the airport's Industrial NPDES monitoring program. The analysis is being used to inform the preliminary design of Regional Stormwater Best Management Practices as well as the necessary system of new stormwater pumps and force mains. In addition to modeling work, the project deliverables include concept design plans and cost estimates for the C.3. equivalent scenarios which involve offsite improvement.



KEY FEATURES:

- ✓ Data gathering and records review
- ✓ Drainage asset investigation and assessment
- ✓ Hydrologic and hydraulic analysis
- ✓ Stormwater report

Street Drainage Analysis

City of Indian Wells, On-Call Design Engineer Services, Indian Wells, CA

Kimley-Horn is providing on-call services to the City of Indian Wells. Typical services include preparing studies, engineering plans, cost estimates, and specifications. During the last three years, we have worked with the City on the following projects as part of this contract:



Indian Wells Golf Resort Sidewalk Improvements: Kimley-Horn was selected to design a new sidewalk within the Indian Wells Resort Campus, connecting the Hyatt Regency, Indian Wells Golf Resort, and Renaissance Indian Wells Resort & Spa. This project is expected to consist of approximately 400 feet of new pedestrian path pavement, which will include a mix of new sidewalk construction, three stop-controlled crosswalks, and utilization of the existing path.

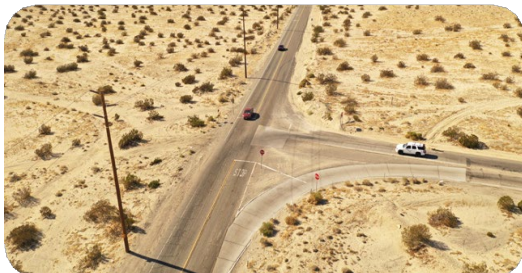
Highway 111/Casa Dorado Driveway Safety Improvements: Kimley-Horn is providing the design for construction safety enhancements and improvements at the Casa Dorado Driveway that connects to Highway 111.

Miles Avenue Bridge Repair: Kimley-Horn is providing final design plan services for the proposed Miles Avenue Bridge Repair Project. Kimley-Horn is serving as the primary civil engineer for the design of repairs needed from the “Valentine’s Day Flood” on February 14, 2019. The flooding eroded the slopes adjacent to the south and north abutment and washed out up to eight feet deep trenches at the outfalls of the 30-inch and 54-inch storm drain culverts on the southside



Coachella Valley Water District (CVWD), Thousand Palms Channel Improvement Project from Sun City Shadow Hills to the Coachella Valley, Coachella Valley, CA

Kimley-Horn is currently partnering with Q3 Consulting in providing final design for the Thousand Palms Channel for CVWD. The project team also includes CHA and Geocon. Our project manager, Frank Hoffmann, P.E., is leading the redesign



of the Avenue 42 channel crossing and Madison Street in the City of Indio. The existing Avenue 42 has severe sight restriction limitations. The new design balances the requirements of the channel crossing hydraulics, sight distance, right-of-way (ROW) and utility impacts, and cost.



KEY FEATURES:

- ✓ Data gathering and records review
- ✓ Drainage asset investigation and assessment
- ✓ Hydrologic and hydraulic analysis
- ✓ Stormwater report

Street Drainage Analysis



Frank Hoffmann, P.E.

Project Manager

Frank has over 37 years of diverse experience in civil design and construction management.

Throughout his career, Frank has focused on local, state, federal, and private roadway improvements. As a long-time Coachella Valley resident, he has a thorough understanding of the local environment. He is passionate about developing innovative, cost-effective designs to upgrade existing roadways.

Professional Credentials

- Bachelor of Science, Civil Engineering, Fachhochschule Rheinland-Pfalz
- Professional Engineer in California #61839 and Arizona #42877
- FAA Part 107 Remote Pilot

Relevant Experience

- » **City of Indian Wells, Indian Wells Golf Resort Sidewalk Improvements, Indian Wells, CA – Project Manager**
- » **City of Indian Wells, Highway 111/Casa Dorado Driveway Safety Improvements, Indian Wells, CA – Project Manager**
- » **City of Indian Wells, On-Call Civil Engineering Services, Indian Wells, CA – Project Manager**
- » **City of Desert Hot Springs, Hacienda Avenue Improvement Project, Desert Hot Springs, CA – Project Manager**
- » **CVWD, Thousand Palms Channel Rehabilitation, Indio, CA – Roadway Project Manager**
- » **City of Ontario, Ontario Ranch Road Widening Project, Ontario, CA – Project Manager**
- » **City of Palm Springs, HSIP Cycle 9 Traffic Signal Improvements, Palm Springs, CA – Project Engineer**
- » **Palm Desert Tennis Club, Pavement Management Data Collection and Analysis, Palm Desert, CA – QC/QA Manager**
- » **City of Cathedral City, Date Palm Drive and Varner Road HSIP Safety Improvements, Cathedral City, CA – Project Manager**
- » **City of Palm Springs, On-Call Civil Engineering Services, Palm Springs, CA – Project Manager**

Street Drainage Analysis



Rich Lucera, P.E., QSD/P, CFM

QC/QA Lead

Rich is a recognized industry leader with more than **33 years** of experience in the fields of civil engineering, stormwater design, and water quality analysis. He brings specialized experience with hydrology/hydraulics, BMP design and construction, drainage infrastructure, stormwater permit compliance, feasibility studies, plan checking, and from successful projects completed for numerous California municipalities, counties, private developers, and the U.S. Navy.

Relevant Experience

- » **City of Indian Wells, Miles Avenue Bridge Repair** – Drainage Lead
- » **City of San Diego, Chollas Creek Watershed Plan Upstream of 48th Street** – Project Manager
- » **City of Norwalk Potter Street Drainage Improvements** – Project Manager
- » **Caltrans, SR-78 Corridor Hydrology** – Project Manager
- » **San Jose Mineta Airport, San Jose International Airport Flood Hazard and BMP Analysis** – Project Manager
- » **City of Santa Monica, Citywide Drainage Capital Improvements** – Project Manager
- » **County of San Diego, Hydraulic and Floodplain Analysis of Keys Canyon Creek** – Project Manager
- » **County of Riverside, Interstate 10 (1-10) Corridor Hydrology and Floodplain Analysis** – QC Lead
- » **City of Palmdale, Amargosa Creek Watershed Hydrology and Floodplain Analysis** – Drainage Lead
- » **TY Lin, Riverside County Transportation and Land Management, Cajalco Road Drainage Improvements and Mead Valley Line A Flood Control Infrastructure** – Project Manager

Professional Credentials

- Master of Engineering, Environmental Engineering, Pennsylvania State University
- Bachelor of Science, Civil Engineering, University of Delaware
- Professional Civil Engineer in California #58089
- Qualified Stormwater Pollution Prevention Plan Developer/Practitioner #00043
- Certified Floodplain Manager #US- 06-02109

Street Drainage Analysis



Kirsten Heerding, EIT

Drainage Lead

Kirsten is an analyst with experience in a variety of civil and environmental engineering projects, including hydrologic analysis and modeling of watersheds; hydraulic analysis and modeling of storm drain infrastructure; hydrology and hydraulics report writing; stormwater quality and BMP design; and storm drain design plan development. Kirsten is also proficient in StormCAD, HEC-RAS, HEC-HMS, AutoCAD, and PCSWMM.

Professional Credentials

- Master of Engineering, Civil and Environmental Engineering, California Polytechnic State University, San Luis Obispo
- Bachelor of Science, Environmental Engineering, California Polytechnic State University, San Luis Obispo

Relevant Experience

- » **City of San Diego, Chollas Creek Watershed Plan Upstream of 48th Street** – Drainage Lead
- » **City of Norwalk Potter Street Drainage Improvements** – Drainage Lead
- » **Caltrans, SR-78 Corridor Hydrology** – Drainage Support
- » **San Jose Mineta Airport, San Jose International Airport Flood Hazard and BMP Analysis** – Drainage Support
- » **City of Santa Monica, Citywide Drainage Capital Improvements** – Drainage Support
- » **City of Chula Vista, Telegraph Canyon Channel Improvements Floodplain Study** – Drainage Support
- » **City of Oceanside, North Coast Highway Corridor Design Drainage and Water Quality Design** – Drainage Lead
- » **City of Elk Grove, Elk Grove Zoo Development Drainage Masterplan** – Drainage Support

Street Drainage Analysis



Nate Lemos, EIT

Drainage Support

Nate has a diverse background in civil and environmental engineering projects. This includes conducting hydrologic analysis and modeling of watersheds, analyzing and

modeling storm drain infrastructure hydraulics, writing hydrology and hydraulics reports, designing stormwater quality and BMPs, and developing storm drain design plans. Nate is proficient in using software including StormCAD, HEC-RAS, HEC-HMS, AutoCAD, and PCSWMM.

Professional Credentials

- Master of Engineering, Civil and Environmental Engineering, University of California, Davis
- Bachelor of Science, Civil and Environmental Engineering, University of California, Davis

Relevant Experience

- » **City of Norwalk Potter Street Drainage Improvements** – Drainage Support
- » **City of Chula Vista, Telegraph Canyon Channel Improvements Floodplain Study** – Drainage Support
- » **City of Oceanside, North Coast Highway Corridor Design Drainage and Water Quality Design** – Drainage Support
- » **City of Elk Grove, Elk Grove Zoo Development Drainage Masterplan** – Drainage Support
- » **County of San Diego, SAN6 Industrial Facility Offsite Improvements** – Drainage Support

Street Drainage Analysis

PROJECT UNDERSTANDING

Kimley-Horn understands that the Client would like to analyze the capacity and function of the existing drainage system in the identified areas of the Indian Wells Country Club (see Figure 1). The Client is requesting a proposal to study the existing condition and propose recommended solutions to problematic areas.

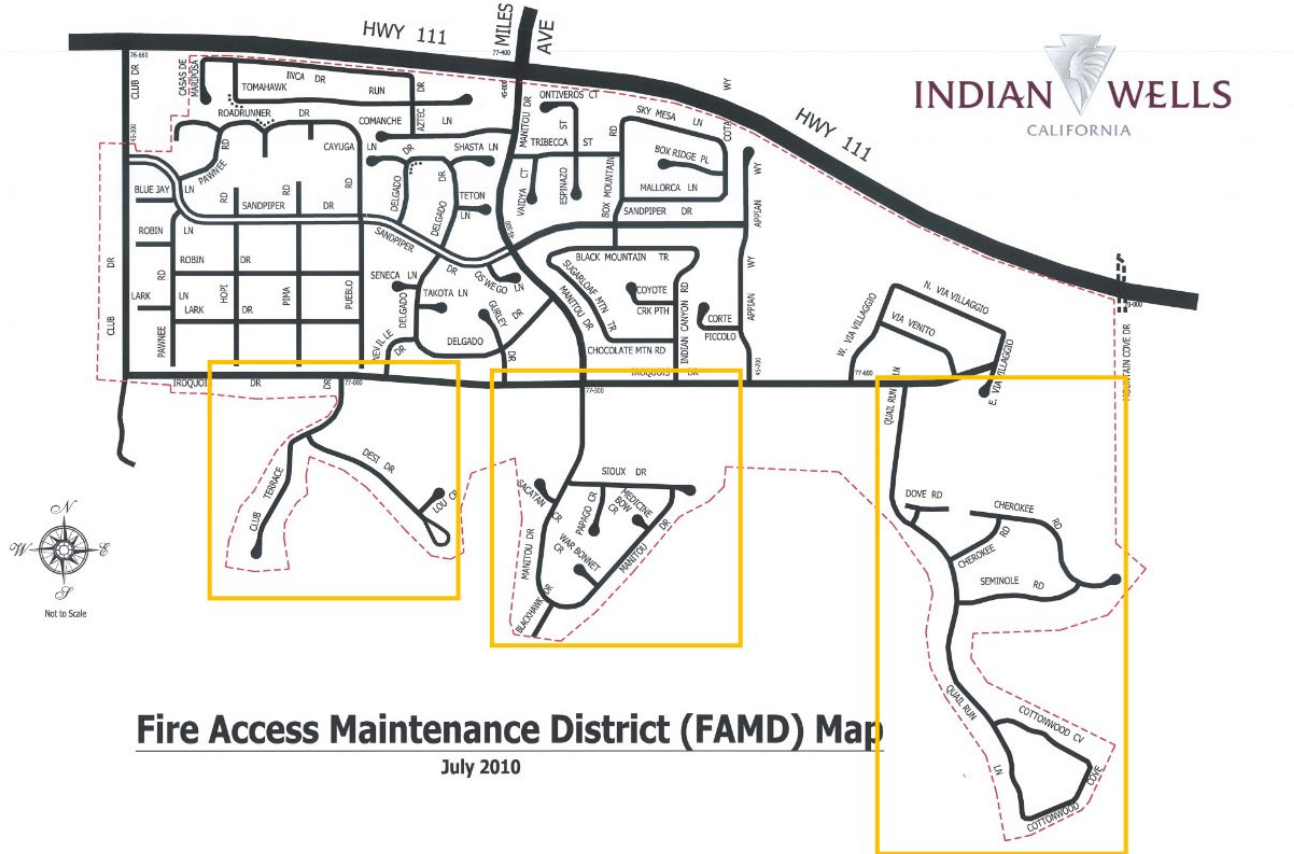


Figure 1: FAMD#1 RFP Exhibit

Street Drainage Analysis

PROJECT APPROACH

The Country Club Community in the City of Indian Wells has experienced historic flooding resulting in extensive damages to residents' homes and properties such as the event on September 8th 2014. Preliminary review of US Geological Survey (USGS) topography and aerial imagery for the County Club Community suggests that the surrounding mountains to the south funnel runoff to the neighborhoods identified in Figure 1, and there is little infrastructure to mitigate flood risk in these areas.

Based upon review of historic imagery, a riprapped lined hydraulic impact basin, detention basin, and spillway leading to Blackhawk Drive have been constructed since the September 2014 event. Review of video footage from the 2023 Hurricane Hillary storms show the added spillway and basin in operation. It appears these facilities are greatly improving flood risk during large storm events. It is our assumption that the areas of greatest concern are associated with large flows originating in the southerly mountains.

Tributary drainage areas relevant to the Country Club community exceed 1,000 acres and are shown in Figure 2 below. A review of aerial imagery in the project area revealed that rolled curb and gutter line most of the neighborhood streets which provides minimum capacity to convey stormwater runoff. Preliminary calculations demonstrate that curb and gutter for the representative street sections would only be able to convey about 30-45 cubic feet per second (cfs). However, the tributary area upstream of each neighborhood cul-de-sac would produce a peak flowrate of approximately 250 cfs. Therefore, these preliminary calculations suggest that the existing curb and gutter only has adequate capacity for 12-18% of the peak expected runoff.

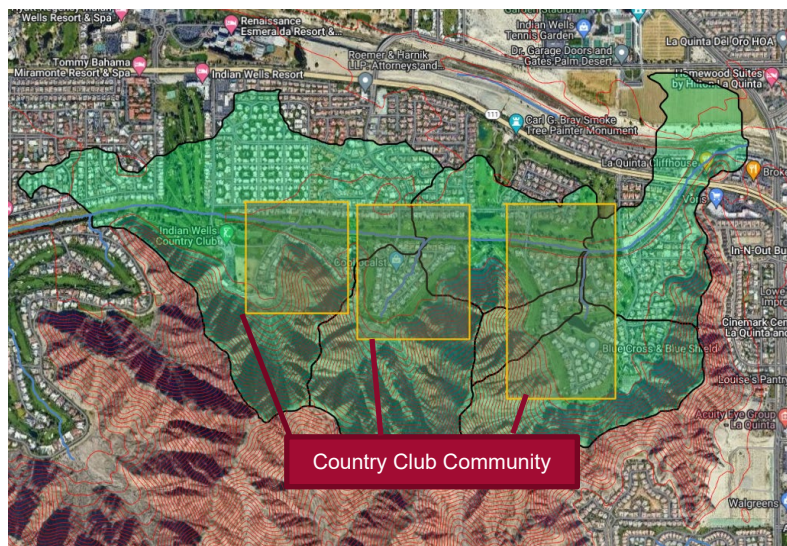


Figure 2: Contributing Drainage Areas to Indian Wells Country Club Community

Kimley-Horn will draw upon the full extent of our multidisciplinary resources to evaluate existing drainage conditions. We recognize that determining the most appropriate flood mitigation recommendations must extend past hydrology and hydraulic analysis and incorporate a comprehensive approach. Potential solutions must also consider costs and long-term maintenance. To meet these challenges, Kimley-Horn's team is composed of personnel who specialize in:

- Planning of Flood Control Infrastructure.** Our team is well versed in the Riverside County Flood Control and Water Conservation District Hydrology Manual, as well as experience with the computational standards of the Draft Hydraulic Design Manual.

Street Drainage Analysis

- **Advanced Hydrologic and Hydraulic Modeling.** Kimley-Horn intends to use cutting edge software such as GeoHEC-HMS that can integrate computational results in a geospatial environment. This allows for unique visualization and efficient flood risk identification.
- **Constructability and Cost Estimation.** Our team will leverage experience with large, multi-disciplined construction projects completed for Caltrans, SANDAG, and numerous local cities and counties in Southern California to recommend constructable and cost-efficient solutions.

SCOPE OF SERVICES

Kimley-Horn will provide the services specifically set forth below.

Task 1: Project Kickoff and Meetings

Kimley-Horn will allocate up to 60 staff hours to attend one (1) Project Kick Off Meeting and two (2) Project Status Meetings. It is assumed that during the Project Kick Off Meeting, the FAMD will provide knowledge of areas within the Country Club Community where drainage issues have been observed. Hours associated with Task 1 consist of:

1. Attending one (1) in-person Project Kickoff Meeting.
2. Attending two (2) in-person or virtual Project Status Meetings, per the FAMD's preference.
3. Producing meeting agendas for distribution prior to meetings.
4. Producing meeting minutes for distribution following meeting completion.
5. Project accounting and invoicing

Deliverables:

- Meeting minutes and meeting agendas for one (1) Project Kick Off Meeting and two (2) Project Status Meetings

Task 2: Hydrologic and Hydraulic Analysis of Existing Drainage System

Kimley-Horn will perform hydrologic modeling using AES to analyze up to 600 ac of tributary area broken up into up to 20 subareas and corresponding node locations. Hydrologic analysis will follow protocols outlined in the Riverside County Flood Control and Water Conservation District Hydrology Manual ("Riverside County Hydrology Manual"). AES will be used to perform Rational Method Hydrology calculations per the Riverside County Hydrology Manual with input parameters developed using GeoHEC-HMS. USGS Topography will be used to delineate subbasins and the NLCD Land Cover Database will be used to determine curve numbers and impervious percent. Three scenarios will be run in AES:

- Existing 2-year, 1-hour storm
- Existing 10-year, 1-hour storm
- Existing 100-year, 1-hour storm

The existing basin's attenuation will be determined in GeoHEC-HMS. Twelve scenarios will be run in HEC-HMS to determine the peak flow:

- Existing 2-year, 1-, 3-, 6-, 24-hour storm
- Existing 10-year, 1-, 3-, 6-, 24-hour storm
- Existing 100-year, 1-, 3-, 6-, 24-hour storm

Street Drainage Analysis

Kimley-Horn will also complete a hydraulic analysis of the drainage system using StormCAD to assess inlets, pipes, and spread. This analysis will incorporate the AES and HEC-HMS resulting flowrates and will analyze the accumulation of existing surface flows at each AES node location within the areas identified in Figure 1. A factor will be applied to the AES and HEC-HMS results for sediment bulking and debris based upon the Riverside County Hydrology Manual. It is assumed that the FAMD will provide as-built records in pdf format and georeferenced files in GIS or CAD format for the existing drainage infrastructure (if any). Two hydraulic modeling conditions will be developed:

- Existing Conditions: incorporates existing infrastructure only
- Proposed Conditions: incorporated existing infrastructure and proposed solutions to problematic areas identified in Task 3.

Limitations and Assumptions:

- Analysis of the central drainage corridor through the golf course north of the project site is assumed unwarranted.
- All existing drainage infrastructure as-builts (if any) will be provided by the FAMD #1 in pdf format and georeferenced files will be provided in GIS or CAD format.
- The FAMD #1 will provide the basis of design report for the existing detention basin in pdf format.
- USGS topography will be used to determine street and gutter elevations.
- Representative curb and gutter sections will be determined during one (1) site visit.
- Site specific topographic survey and utility coordination is considered additional work.
- No geotechnical investigations are included.

Deliverables:

- a. AES summary reports for the three identified scenarios (attached to the drainage report in Task 3).
- b. HEC-HMS summary reports for the twelve identified scenarios (attached to the drainage report in Task 3).
- c. StormCAD summary reports for the two modeling conditions (attached to the drainage report in Task 3).

Task 3: Drainage Report

Kimley-Horn will complete a drainage report in accordance with the Hydraulic Design Manual for Riverside County. The report will summarize findings from the hydrologic and hydraulic analyses as well as comment on if the drainage system is adequate to comply with street flow requirements detailed in the Hydraulic Design Manual for Riverside County. The Drainage report will also incorporate recommended solutions to problematic areas identified during the Project Kickoff Meeting in Task 1 and those identified during hydraulic modeling of the existing condition in Task 2. The report will include cost estimates associated with each solution.

Limitations and Assumptions:

- Water Quality analysis and reports is considered additional work.

Deliverables:

- a. Preliminary Drainage Report and associated appendices
- b. Final Drainage Report incorporating one round of FAMD #1 comments

Street Drainage Analysis

SCHEDULE

We will provide our services as expeditiously as practicable. Upon receiving Notice to Proceed (NTP), Kimley-Horn will prepare and submit deliverable items described in this scope according to the schedule on the following page.

Street Drainage Analysis

Proposed Project Schedule

ID	Task Name	Start	Finish	Qtr 1, 2024	Qtr 2, 2024	Qtr 3, 2024	Qtr 4, 2024
1	FAMD#1 - Indian Wells Country Club Community Street Drainage Analysis						
2	Project NTP	Mon 2/26/24	Mon 2/26/24				
3	Task 1: Project Kickoff and Meetings	Tue 2/27/24	Thu 8/29/24				
4	Task 2: Hydrologic and Hydraulic Analysis of Existing Drainage System	Tue 2/27/24	Mon 5/13/24				
5	Task 3: Drainage Report	Tue 5/14/24	Thu 8/29/24				
6	Draft Drainage Report	Tue 5/14/24	Fri 6/28/24				
7	FAMD #1 Review	Mon 7/1/24	Tue 7/30/24				
8	Final Drainage Report	Wed 7/31/24	Thu 8/29/24				
9	Project Completion	Fri 8/30/24	Fri 8/30/24				

Street Drainage Analysis

FEE AND EXPENSES

Kimley-Horn will perform the services in Tasks 1 - 3 on a labor fee plus expense basis with the maximum labor fee shown below.

Kimley-Horn will not exceed the total maximum labor fee shown without authorization from the Client. Individual task amounts are provided for budgeting purposes only. Kimley-Horn reserves the right to reallocate amounts among tasks as necessary. The rates used to prepare this fee are valid through June 30, 2024. An hourly breakdown of the fee by project task is included on the following page.

Task 1	Project Kickoff and Meetings	\$ 13,465
Task 2	Hydrologic and Hydraulic Analysis of Existing Drainage System	\$ 25,300
Task 3	Drainage Report	\$ 26,565

Maximum Labor Fee	\$ 65,330
--------------------------	------------------

Labor fee will be billed on an hourly basis according to our then-current rates. As to these tasks, direct reimbursable expenses such as express delivery services, fees, air travel, and other direct expenses will be billed at 1.15 times cost. A percentage of labor fee will be added to each invoice to cover certain other expenses as to these tasks such as telecommunications, in-house reproduction, postage, supplies, project related computer time, and local mileage. Administrative time related to the project may be billed hourly. All permitting, application, and similar project fees will be paid directly by the Client. Should the Client request Kimley-Horn to advance any such project fees on the Client's behalf, an invoice for such fees, with a fifteen percent (15%) markup, will be immediately issued to and paid by the Client.

Payment will be due within 30 days of your receipt of the invoice and should include the invoice number and Kimley-Horn project number.

Kimley-Horn and Associates, Inc.							
Category/Title	Sr. Professional II	Sr. Professional I	Sr. Professional	Analyst II	Analyst II	Project Support	
Billing Rate	\$350	\$315	\$255	\$200	\$175	\$110	TOTAL HOURS
Task 1 Project Kickoff and Meetings	6	16	0	0	33	5	60 \$ 13,465
Task 2 Hydrologic and Hydraulic Analysis of Existing Drainage System	16	24	3	0	65	0	108 \$ 25,300
2.1 Hydrologic and Hydraulic Analysis of Existing Drainage System	16	24	3	0	65	0	108 \$ 25,300
Task 3 Drainage Report	15	26	0	0	75	0	116 \$ 26,565
3.1 Draft Drainage Report	10	16			50		76 \$ 17,290
3.2 Final Drainage Report	5	10			25		40 \$ 9,275
	37	66	3	0	173	5	284
Subtotal Labor:	\$12,950	\$20,790	\$765	\$0	\$30,275	\$550	\$ 65,330
Other Direct Costs							\$ -
TOTAL COST:							\$ 65,330



STREET DRAINAGE ANALYSIS REQUEST FOR PROPOSAL

Fire Access Maintenance District (FAMD #1)
Indian Wells Country Club Community
42-635 Melanie Place Ste 103
Palm Dester, California 92211

January 25, 2024

Prepared by:





REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

This page was intentionally left blank.



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

Cover Letter

January 25, 2024

Fire Access Maintenance District #1 (FAMD)
Indian Wells Country Club
42-635 Melanie Place Ste 103
Palm Desert California 92211
Attn: Mr. Scott Matas (District Manager)

Subject: Request for Proposals for Professional Services
Drainage Analysis for Manitou Drive, Sioux Drive, and Quail Run Lane

Dear Mr. Matas:

Q3 Consulting is pleased to submit this proposal to prepare a drainage evaluation and provide concept solutions for the Manitou Drive, Sioux Drive, and Quail Run Lane sites. We have reviewed the Request for Proposal dated December 18, 2023 and understand the elements involved in the project. Our team has performed similar studies involving complex terrain (steep mountains adjacent to residential areas) with success. The Q3 team members provide a unique set of qualifications including:

- **Advanced Modeling Expertise.** The team has completed multiple Coachella Valley storm drain projects using a linked 1D-2D hydraulic model, capable of evaluating drainage alternatives and solutions quickly and economically to pin-point exact locations to implement improvements that will best suit the entire drainage area. Similar to our work on La Quinta, Q3's engineers were able to identify solutions for specific areas that provided the best overall impact in the drainage system.
- **Local Storm Drain Project Experience.** Team members are currently working on and have recently completed multiple storm drain evaluation and design projects in the Coachella Valley. We know and understand local and regional drainage design standards. We understand and have studied the Coachella Valley's climate, which produces "flashy" types of storms, especially in the summer. Our engineers have worked on storm drain projects within the Coachella Valley for over 21 years

As a focused Stormwater firm, our senior level staff are directly involved in the project. This allows us to expedite the project delivery and reduce the overall project cost.

I, Tom Ryan, will serve as Project Manager for this project. I have more than 25 years of experience in surface water management, including recent storm drain analysis and design projects. We have read the RFP and acknowledge the requirements. If you have any questions or comments, please feel free to contact me at 949-900-6216 or by email at tryan@q3consulting.net.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Tom Ryan".

Tom Ryan, PE
Principal



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

Table of Contents

Section 1. Firm Experience	1
Section 2. Project Team	7
Section 3. Project Understanding and Approach.....	16
Section 4. Cost Proposal	25

ATTACHMENTS

1 - Proof of Insurance



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

1 Firm Experience

Company Overview

Q3 Consulting (Q3) was created by three engineers whose careers have focused on providing the highest quality of services in the stormwater field. Successfully working together for more than 18 years, it became apparent that their individual specializations and comprehensive knowledge of the stormwater field formed a solid foundation for the start of Q3. Each with more than 20 years of experience, the principals of Q3 bring together an extensive background in the planning, analysis, and design of comprehensive flood control engineering and stormwater management projects.

Specializing in the Coachella Valley, each of the team members have extensive experience with CVWD, Riverside County, and multiple Cities guidelines and design criteria. Within the last 10 years, the Q3 team members have focused on providing Coachella Valley municipal and private sector clients with advanced approaches to understanding and evaluating cost effective flood control solutions for the unique conditions of the arid desert environment. Recent projects include preparing advanced models and design services for private and municipal clients in the Cities of Indian Wells, La Quinta, Rancho Mirage, Coachella and Cathedral City. The team's detailed stormwater engineering services include:

Services

- Regional Flood Control Channel Design
- Local Storm Drain Design
- Hydrologic Modeling
- 1- and 2-Dimensional Hydraulic Modeling
- Sediment Transport and Fluvial Systems
- Floodplain Mapping and Revisions
- CLOMR/LOMR Applications
- Drainage Master Planning
- Channel Erosion Control Studies & Design
- Reservoir Operation and Water Conservation
- Stormwater Quality
- Construction Documents
- Plan Check/Value Engineering Services
- Engineering during Construction

Q3 is a dba of Proactive Engineering Consultants Inc. (PEC). PEC is a Southern California based Civil Engineering Consulting Firm (corporation) serving Governmental Entities and the Development Community.

Q3 Consulting/Proactive Engineering Consultants, Inc. is a California Certified Small Business (DGS #2009320).

Contact Person

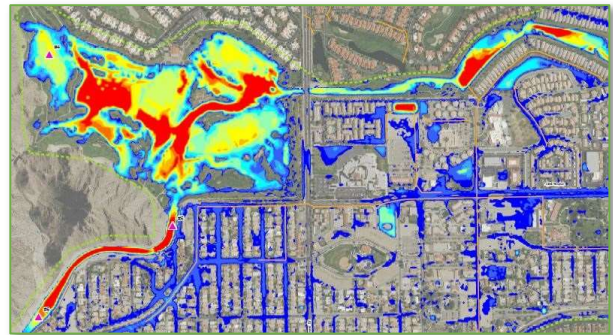
Mr. Tom Ryan, PE, Principal
Q3 Consulting
27051 Towne Centre Drive, Suite 270
Foothill Ranch, CA 92690
Mobile: (949) 466.6306
tryan@q3consulting.net

Project Experience & References

Representative projects completed by the Q3 team members, including reference contact information is provided below for similar projects completed within the last ten years.

01 | La Quinta Focused Drainage Study & Design, La Quinta, CA

Q3 team members prepared hydrology and hydraulic analysis and developed preliminary design plans for an area of the City of La Quinta hardest hit by recent extreme storm events in 2013 and 2014. The study evaluated the flood risk associated with extreme storm events, and identified potential drainage improvements to reduce future flood damage and increase public safety if or when extreme storm events occur. The team prepared a coupled 1D and 2D hydrology and hydraulic model encompassing three square miles in the City. This innovative model incorporated surface topography with as-built storm drain information and distributed rainfall to accurately model the unique conditions of the study area.



1D/2D Linked Hydrologic & Hydraulic Model

The study included the preparation of a coupled 1D and 2D hydrology and hydraulic model for the study area. Offsite hydrology was prepared using County Hydrology Manual procedures. Onsite hydrology was evaluated using a direct rainfall method, or “rain on grid” applied over the study area. The model was correlated to historical flood photos taken during the September 2014 storm event. The advance model was used to more accurately depict drainage flow paths and overflow patterns and storm water runoff volumes in the identification of appropriate storm drain infrastructure. The results of the analysis were used to develop alternatives and cost estimates for recommended improvements to reduce the flood hazard during extreme events. The analysis led to three separate design projects that both Tom Ryan and John McCarthy managed.



Eisenhower Blvd, September 9, 2014

Client Reference

City of La Quinta
Ed Wimmer (No Longer at City)
Nick Nickerson (NIA) Consulting Manager
(760) 777.237, nnickerson@naiconsulting.com

Completion: 2019

Key Personnel

Tom Ryan, Project Manager
John McCarthy, Principal In-Charge

02 | Indian Wells Crossings Project, Indian Wells, CA

Q3 originally contracted with The Kiner Group to provide engineering services for the Whitewater River, Indian Wells Crossing site development project. This project is funded partly by the City of Indian Wells. Mr. Ryan is the acting Project Manager, prepared the a project design report (PDR) and close to finalizing channel improvement plans for proposed improvements to the Whitewater River Stormwater Channel (WWRSC). The project reach within the WWRSC extends approximately 3,000 feet downstream (east) of Miles Avenue Bridge and 1,500 feet



WWRSC Miles Avenue Bridge

upstream (west) of the bridge. Q3 prepared detailed hydraulic analyses for existing conditions and the proposed modifications to the WWRSC to support the design of the proposed flood control improvements. The detailed analyses included HEC-RAS hydraulic models, Regime Equation scour calculations, sediment transport modeling, drop structure evaluation and design, and local bridge element scour calculations.

The project proposes to widen the land area along the southerly bank of the WWRSC between Highway-111 and the WWRSC both east and west of Miles Avenue to provide more developable land area for the proposed Indian Wells Crossing commercial center and the proposed Indian Wells Resort. Widening of the land area requires a realignment of the southerly bank of the WWRSC. The proposed improvements include construction of approximately 12,000 lf of concrete slope lining, improvements to existing grade control structure, and several small stormdrain outlets to the WWRSC for local drainage. All of the proposed improvements will be designed in accordance with new CVWD Draft K-3 Guidelines and Ordinance 1234.2. Several workshops are being held with CVWD staff and there review consultant to develop a design that meets the needs of the project and would be acceptable to CVWD when dedicated to them for ownership and maintenance.

Client Reference

The Kiner Group
Mr. Michael Kiner
(760) 340.3360
michael@thekinergroup.com

City of Indian Wells
Ms. Dina Purvis
(760) 346.2489
dpurvis@IndianWells.com

Completion: Ongoing

Key Personnel

Tom Ryan, Project Manager
Howard Barndt, Lead Hydraulic Engineer
John McCarthy, QA/QC
Candace Tong, Project Engineer

03 | La Entrada Drainage Master Plan, Coachella Valley, CA

Q3 team members prepared the technical studies for the development of a drainage and flood protection master plan for the proposed 2,200-acre La Entrada Specific Plan Project, located in the City of Coachella, California. The La Entrada Specific Plan consists of a master planned residential community that will include three village areas with mixed-use community cores, significant sustainability elements, and a robust parks and open space plan.

The project site includes seven (7) regional conveyances tributary to the Eastside Dike along the Coachella Canal. The team completed regional hydrology studies, and 1- and 2-dimensional flood routing analyses to support the technical studies and identified the recommended improvements and project mitigation measures. Alignments and conceptual design for 7 regional channels through the site were prepared.

On-site hydrology was prepared for the specific plan site to identify the required storm drain pipe and retention basin systems to support the development. Rational method hydrology was prepared for the 100-year storm event. Retention basins were sized to capture the difference in runoff volume between the existing and project conditions. Preliminary layouts and locations for the basins were prepared.

The studies were incorporated into a Master Drainage Plan for the site development. The master plan was coordinated with City and CVWD for review and conceptual approval.

Client Reference

New West Company
Mr. Terry Manley
(702) 293.9030

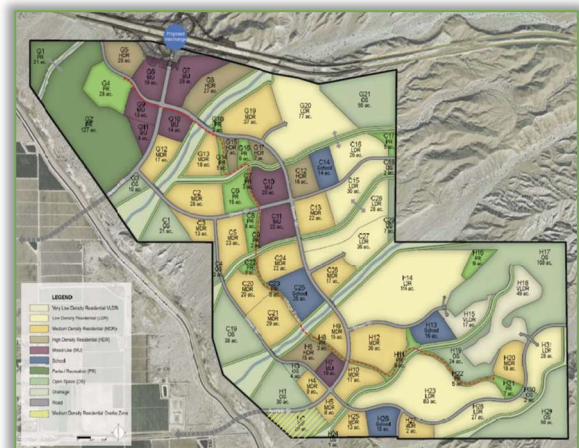
Completion: 2013

Key Personnel

John McCarty, Drainage Manager
Howard Barndt, Project Engineer
Tom Ryan, Project Engineer



2-D Hydraulic Analysis of Proposed Regional Channel System



La Entrada Specific Plan



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

04 | Travertine Flood Hazard Mitigation Plan, La Quinta, CA

Q3 prepared the technical studies and preliminary design for the development of a drainage and flood protection master plan for the proposed 905-acre mixed-use project located in the City of La Quinta and unincorporated Riverside County, California. The Travertine Specific Plan is located on an area of active alluvial fan flooding at the base of the Santa Rosa Mountain range. The site is above the flood impoundment area of the West Dike System No. 4 build by the US Bureau of Reclamation (BOR) and adjacent to the Guadalupe Dikes constructed by the Coachella Valley Water District (CVWD).

Q3 prepared updated hydrology for the 10 canyon drainages and 3 piedmont subbasins that discharged through the project site and encompass the 27 square mile watershed tributary to Dike No. 4. Pre- and post-project hydrology was prepared to assess the project impacts and identify mitigation measures for the site development. The team completed a geomorphic assessment of the piedmont area to evaluate the active and inactive alluvial fan areas.

Flood routing and storage analyses were prepared for the project site and entire impoundment area of Dike No. 4. Two-dimensional flood routing models were prepared for the project site. The study considered various flow paths to account for the uncertainty of flooding on the active fan areas. The study evaluated the impacts on the Dike No. 4 and Guadalupe Dikes with the project improvements.

Using the results of the hydrology and hydraulic modeling a flood hazard mitigation plan was prepared. The plan helped establish the footprint for the development site and identified the recommended flood protection improvements. The studies were incorporated into a Drainage Master Plan for the site development. The master plan was coordinated with City and CVWD for review and approval.

SERVICE AREAS

- Regional and Local Hydrology
- 2-Dimensional Flood Routing
- Geomorphic Assessment
- Alluvial Fan Hydraulics
- Regional Facility Sizing
- Drainage Master Plan
- Dike and Levee Evaluations
- CVWD Coordination/approvals

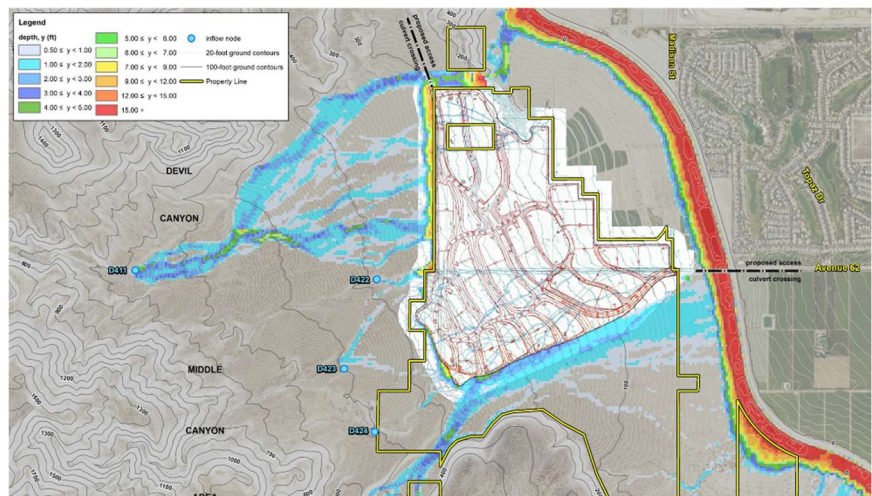
Client Reference

Travertine Corporation
Mr. Jim Hildenbrand
(925) 639.4204
jhildenrand@hotmail.com

Completion: 2022

Key Personnel

John McCarthy, Project Manager
Howard Barndt, Project Engineer



2-D hydraulic analysis of proposed regional flood hazard mitigation system

05 | Redlands Drainage Master Plan, Redlands, CA

The project included the preparation of a drainage master plan for the city to update its drainage infrastructure and to identify regional drainage solutions to the city's flooding issues. The project included advanced hydrologic and hydraulic modeling, flood control alternative evaluation using 2D hydraulic modeling, City-wide master drainage plan development and, and stakeholder coordination including the preparation of state-of-the art video depictions of the flood hazard.

The team prepared a linked one-dimensional and two-dimensional hydraulic model for the downtown area, using 2D hydraulic software to evaluate surface and subsurface conveyance capacities. Multiple studies had been performed over the last few decades to try and find solutions to the downtown flooding, with no success. By using an advanced hydraulic model, the team was able to identify major issues, previously unknown to the City, and develop mitigation alternatives that worked.

A major hurdle for the City was to gain the acceptance of the project need and recommendations by the City Council and several outside stakeholders. Initially unsuccessful with traditional hydraulic output graphics, Mr. Ryan led the development a three-dimensional animation of the flood hazards in the downtown area to help stakeholders understand the flood hazards and the benefits of the proposed improvements. The video animations were used at City Council and Stakeholder meetings. The result was a unanimous vote to proceed with the next step in the funding process. The video animation was a state-of-the-art application that received the *International Virtual Design World Cup Award for the Best Engineering Public Works Project Award*.

Client Reference

City of Redlands
Mr. Monty Morshed
(909) 798.7584
mmorshed@cityofredlands.com

Completion: 2014

Key Personnel

John McCarthy, Principal-in-Charge
Tom Ryan, Project Manager



Linked 1D-2D Hydraulic Model of City Downtown Area



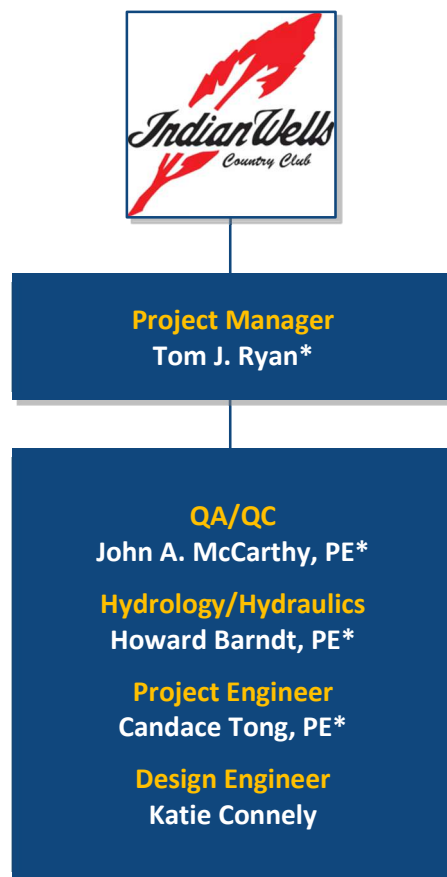
REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

2. Project Team

Q3 is committed to providing FAMD with the high quality and personal attention needed to complete the Drainage Evaluation in a timely manner. As a focused stormwater engineering firm, our experienced staff are dedicated to meeting the District's needs. The high-level experienced staff on the organization chart are the individuals that will be directly involved on the project and with the City.

Our team's experience, understanding of the regional climate, successful track record, working relationships with CVWD and the City of Indian Wells, combined with our history providing professional services throughout Southern California and the Coachella Valley, gives us the ability to successfully complete the services on this contract. Our team of highly experienced professionals are known in the industry for their demonstrated expertise. The Q3 key personnel involved in performing the work and their project roles and qualifications are shown in the following organization chart and key personnel table.

Organization Chart



* Key Project Staff

Key Personnel

KEY PERSONNEL/ROLE CONTACT NUMBER LICENSE AND CERTIFICATIONS	DESCRIPTION OF EXPERIENCE
Tom Ryan, PE Project Manager  Civil Engineer, CA #61701	<ul style="list-style-type: none"> La Quinta Focused Drainage Study, La Quinta, CA Whitewater Channel Evaluation of Debris Capture and Flood Conveyance, Indian Wells, CA Indian Wells Crossings Project, Indian Wells, CA Washington Street & Calle Tampico Drainage Improvements, La Quinta, CA City of Coachella Master Plan of Drainage, Coachella, CA La Entrada Drainage Master Plan, Coachella, CA
John A. McCarthy, PE, CFM QA/QC Principal-in-Charge  Civil Engineer, CA #47583	<ul style="list-style-type: none"> Indian Wells Crossings Project, Indian Wells, CA Travertine Development Regional Drainage Improvements, La Quinta, CA Date Palm Drive Bridge and Channel Improvements, Cathedral City, CA Messenger Properties Floodplain Analysis, Rancho Mirage, CA La Entrada Master Plan of Drainage, Coachella, CA Lazar Development Floodplain Study, Rancho Mirage, CA
Howard J. Barndt, PE Hydrology & Hydraulics Lead  Civil Engineer, CA #65914	<ul style="list-style-type: none"> Indian Wells Crossings Project, Indian Wells, CA Travertine Flood Hazard Mitigation Plan, La Quinta, CA La Entrada Specific Plan Regional Flood Study, Coachella, CA Avenue 50 Interchange on Interstate 10, Coachella Valley, CA Mill Creek Garnet Street Bridge Widening, San Bernardino, CA Combined Riverine and Floodplain Analysis, Upper San Joaquin portion of the Central Valley, Central CA
Candace Tong, PE Project Engineer  Civil Engineer, CA #47583	<ul style="list-style-type: none"> Whitewater Channel Evaluation of Debris Capture and Flood Conveyance, Indian Wells, CA City of Coachella Master Plan of Drainage, Coachella, CA Washington Street & Calle Tampico Drainage Improvements, La Quinta, CA City of Chino Master Plan of Drainage, Chino, CA Grand Terrace Detailed Regional Drainage Analysis, Grand Terrace, CA

Resumes

Please find detailed resumes for key personnel on the following pages.



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

Tom J. Ryan, PE Project Manager

Mr. Ryan has more than 26 years of engineering experience and 14 years of project management experience. Project experience includes preparation of flood control plans, specifications, and estimates, advanced hydrologic/hydraulic analyses, drainage master plans, FEMA and DSOD studies, channel restoration, and water quality planning and design. In recent years, Tom's work in advanced urban area dynamic hydraulic modeling and public awareness has included first-of-its-kind flood routing simulations that resulted in award winning projects and numerous national and local presentations and publications.

Project Experience

La Quinta Focused Drainage Study, La Quinta California – City of La Quinta. Project Manager responsible for the preparation of the hydrologic and hydraulic models that encompassed the majority of the City. Mr. Ryan used XPSWMM's 1D/2D model to create a comprehensive model capable of analyzing the entire City's storm drainage system in response to a 500-year storm event. The study was triggered after two years of consecutive extreme storm events. The largest storm even, September 9th, 2014 dropped approximately 3-inches of rain in one hour causing multiple locations to flood. The drainage system was overrun by the thunderstorm's flash flood-like runoff that was a product of heavy rain, short duration, and adjacent hillside runoff. The models were prepared using data from the 2014 storm event and flood depths in the model correlated to actual storm photos. The model was then used to identify drainage improvements in five locations within the City. Mr. Ryan and Mr. McCarthy were responsible for developing the design alternatives for four of the locations. The use of these models showed more realistic design alternatives than using standard H&H models.

City of Coachella, Stormwater Master Plan, Coachella, California. Project manager for technical flood routing studies which included evaluating the entire City's drainage patterns and developing concepts to improve the current drainage deficiencies. This project was in cooperation with Coachella Valley Water District, as a part of a regional partnership with the City to identify flood control mitigation measures. The Q3 Team prepared technical hydraulic models to develop economically feasible alternatives. Using a more advanced modeling approach, Q3 was able to identify solutions that cost much less than if traditional hydrology and hydraulics were prepared.

Washington Street & Calle Tampico Drainage Alternatives and Improvements, California – City of La Quinta. Mr. Ryan was the acting Project Manager responsible for acquiring and starting the preparation of the design plan improvements for two locations along Washington Street and a portion of the Calle Tampico storm drain systems. Work included refining the models and design concepts from the Focused Drainage Study results and designing preliminary plans and cost estimates for the proposed facilities.

Whitewater Channel Evaluation of Debris Capture & Flow Conveyance, Indian Wells, California. City of Indian Wells. Project Engineer for the evaluation of two existing grade control structures and 1.5 miles of Whitewater River channel. The study evaluated the functionality of the two grade control structures and the existing channel low flow system. Recommendations were made for improving the grade control structures and grading a more efficient low flow channel system. Mr. Ryan oversaw the preparation of hydraulic models in HEC-RAS to evaluate channel characteristics of the grade control structures, as well as, alternatives for low-flow channel designs. These results were used to evaluate the

Years of Experience: 26

Registration

Civil Engineer, CA #61701 – 2000

Education

M.S., Royal Institute of Technology, Stockholm, Sweden, Environmental Engineering – 1997

B.S., California State University, Long Beach, Civil Engineering – 1995

Professional Affiliations

Member, American Society of Civil Engineers (ASCE)



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES

Street Drainage Analysis

grade control structure performances and to ensure the hydraulic jumps were within the reach of the existing facilities. A report was prepared outlining the methods, recommendations, and rough order magnitude costs of the proposed improvements.

Indian Wells Crossing Project, Indian Wells, California. *The Kiner Group.* Project Manager responsible for evaluating the impacts of proposed improvements along 3,000 linear feet the WWRSC. Work includes hydraulic modeling, comparing the new CVWD Draft K-3 scour guidelines to a detailed sediment transport model, prepared by Q3. Results of this analysis will be used to design bank protection, improve existing grade control structures, and identify potential impacts to the Miles Avenue bridge. Currently, Q3 is working with CVWD to develop and modify current standards for design.

La Entrada Master Plan, California. *Coachella Valley, California.* Project engineer responsible for the analysis and design for the relocation of the Coachella Canal and prepared drainage calculations for the sizing of proposed facilities for the Master Plan. Work included hydraulic modeling, hydrology, and design plan preparation.

Laguna Canyon Channel, Focused Drainage Study and Design, Laguna Beach, CA – City of Laguna Beach. Project Manager responsible for the development of an advanced 1D/2D model to look at the existing flood issues that impacts the downtown area of Laguna Beach. Currently they experience major flooding (1-3' of flooding) every 10 years or so. The advanced model was used to identify more feasible drainage solutions, than previously identified in studies. Linking the subsurface infrastructure with the surface flows, and using distributed rainfall modeling, allowed the team to identify a solution that was more feasible. The alternative identified was 40-percent less than previous studies. Phase 1 of these improvements were designed by Mr. Ryan and Brittany Bair.

Regional Drainage Focused Study, Redlands, California. *City of Redlands.* Project Manager responsible for performing an investigation of the City of Redland's regional drainage historical downtown flooding problems. The team modeled the City's urbanized area using a fully dynamic, linked 1-dimensional/2-dimensional (1-D/2-D) model. A first of its kind, 3-D flood animation was created that allowed non-technical audiences to understand and see the impacts of the recommended improvements.

Avenue 50/American Canal Culvert Crossing PS&E, Indio, California. Project manager responsible for the preparation of plans, specifications, and cost estimates for an ultimate canal crossing. Included in the project was the analysis and design of a temporary bypass channel and phasing of construction, as the canal had to remain functional during the construction of the project. During the project, Mr. Ryan was pivotal in coordinating with multiple agencies.

City of Yucaipa, Ultimate Culvert Crossing Designs, Yucaipa, California. Project engineer for the design of two ultimate (100-year) culvert crossings. Responsibilities included hydraulic analysis, plan preparation and oversight, utility agency coordination, pressure (water) line relocation, cost estimations, specification writing, and roadway design and realignment. Additional responsibilities included coordination and completion of California Department of Transportation (Caltrans) Local Assistance forms required for this federally funded project.



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

Howard J. Barndt, PE *Hydrology & Hydraulics*

Mr. Barndt is experienced in regional and local hydrology studies, urban drainage design, regional and local flood control design, flood- and dam-inundation studies, 1- and 2-dimensional hydraulics, sediment transport and scour analysis, floodplain management studies, reservoir operations, and dam/levee breach and inundation studies. Mr. Barndt's extensive work in the Coachella Valley region has given him an intimate knowledge of CVWD's regulations and guidelines. He currently on the review team for CVWD's guidelines.

Years of Experience: 19+

Registration

Civil Engineer, CA #65914 – 2004

Education

B.S., Civil Engineering, California State University, Long Beach – 1999

M.S., Civil Engineering (Water Resources), California State University, Long Beach – 2004

Project Experience

Indian Wells Crossing Project, Indian Wells, California. *The Kiner Group.* Technical Manager responsible for preparing hydraulics, scour calculations and running a full sediment transport analysis of the WWRSC reach between Fred Waring and Jefferson. As technical lead, Mr. Barndt is coordinating with CVWD to develop the channel improvement design guidelines for the proposed development (Indian Wells Crossing).

La Entrada Avenue 50 Extension Final Engineering Coachella Valley, California - *City of Coachella.* Engineer responsible for developing the basis of design as it relates to the scour and flood hazard protection required for existing infrastructure and proposed improvements. Michael Baker provided design services for a project to connect existing Avenue 50 at Fillmore Road to the proposed Avenue 50 Interchange on Interstate 10 (I-10). Once connected to the I-10 interchange, this stretch of Avenue 50 will provide essential access and regional circulation to the City of Coachella from the East. Additionally, the Avenue 50 project will facilitate the necessary infrastructure, including utilities corridors, for the La Entrada Specific Plan. The project includes the design of approximately 7,200 lineal feet of six-lane arterial roadway with NEV and bike lanes.

La Entrada Specific Plan Regional Flood Studies, Coachella Valley, California. *PSAV, LLC* – Engineer responsible for performing the baseline and project conditions regional hydrology flood routing, and sedimentation studies and the subsequent determination of impacts and mitigation alternatives; and prepared the basis and attained approval for a major deviation from CVWD development standards, which substantially reduced the flood hazard, resulting in viable project. The specific planning area consists of development footprint of more than 1,700 acres, situated on the lower piedmont below the Little San Bernardino Mountains and immediately upstream from the Coachella Canal, which sit atop of the East Side Dike. The segment of the East Side Dike, which fronts the specific planning area has contributing watershed of more than 50 square miles with numerous natural conveyances, seven of which intersect the development footprint. Alignments and conceptual plans were developed to integrate these conveyances with planned development of the specific planning area. The existing conditions of the levee as well as proposed roadway crossing encroachments across the levee system were evaluated.

Travertine Flood Hazard Mitigation Plan, La Quinta, California. *Travertine Corporation* – Project Engineer responsible for preparing technical studies to support the drainage and flood protection master plan for a proposed 905-acre development located at the foothills of an active alluvial fan. Mr. Barndt prepared pre- and post-condition hydrology for the project site and completed a geomorphic assessment of the alluvial fan activity. Work also included using a 2D model to analyze the alluvial fan flow characteristics in conjunction with applying storage and diversion strategies to mitigate potential flood damage. Using Mr. Barndt's analysis results, the client established the footprint of the proposed development and



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

recommended flood protection improvements. CVWD and the City approved the results of the Master Plan.

Avenue 50 Interchange on Interstate 10, Coachella Valley, California. *City of Coachella* – Engineer responsible for evaluating the project impacts related to the existing flood conveyance crossings. Mr. Barndt prepared a project study report and provided state and federal environmental documentation for the I-10/Avenue 50 Interchange Project. The purpose of the project is to relieve forecasted congestion on I-10 and S.R. 86, including the Dillon Road interchanges. The interchange improvements will provide a new gateway into the city and improve access to I-10 for vehicles traveling in and out of the city. Michael Baker prepared the project report; new connection report; environmental documentation; geometric approval drawings; design exceptions fact sheets; and plans, specifications, and estimates (PS&E).

Combined Riverine and Floodplain Analysis, Upper San Joaquin portion of the Central Valley, Central California. *California Department of Water Resources* – Engineer responsible for providing technical guidance and oversight related to 2-dimensional hydraulic modeling issues; served on leading team assisting the California Department of Water Resources in providing floodplain evaluation and delineation services as part of a five-year program to evaluate the state's Central Valley Flood Control System. The program is part of the Flood Safe California strategic initiative; evaluated and delineated areas protected by project levees within the Upper San Joaquin study area, which includes rural and urban areas in portions of Fresno, Merced, Kings, and Madera counties. The study also looked at non-project levee impacts on the overall system. The project included orthophotography and LiDAR mapping of both rural and urban environments in the lower Central Valley. The surveys were used to support the preparation of studies used by the Department of Water Resources (DWR), the U.S. Army Corps of Engineers (USACE), the Federal Emergency Management Agency (FEMA), and local communities to address future flood risk and improve levee integrity.

Mill Creek Garnet Street Bridge Widening, San Bernardino, California. *San Bernardino County* – Engineer responsible for hydraulics, sediment transport, and scour studies, which contribute to the basis of design. Michael Baker managed the preparation of wetland delineation, permitting, and compliance from environmental documents previously prepared for conformity in support a joint Initial study/categorical exclusion (IS/CE) for the Garnet Street Bridge Replacement project. The County of San Bernardino intended to replace the bridge with a new state-of-the-art bridge to accommodate existing traffic volumes. The width of the old bridge was approximately 17-feet 10-inches-wide (rail-to-rail), including an approximately 16-foot 10-inch travel way. The bridge was 159-feet-long with two abutments and one center pier. The new bridge is approximately 52-feet-wide and includes the abutments and piers, with a wider travel way to accommodate modern vehicles that are wider than older models. All existing pipelines and utilities were relocated as necessary.



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

John A. McCarthy, PE, CFM *Construction Documents*

Mr. McCarthy is experienced in the development, final design, and construction of flood control and drainage projects for public works and private sector projects. He has completed the planning, final design, and inundation mapping for numerous regional dam facilities under the jurisdiction of the State DSOD. Mr. McCarthy specializes in design project within the Coachella Valley and Riverside County areas. His long history of work with CVWD has resulted in strong relationships with the management and staff. Mr. McCarthy is on the technical review list for new CVWD design criteria.

Project Experience

La Entrada Drainage and Hydrology Studies, Coachella, CA. PS&V, LLC. Drainage Manager. Responsible for hydrology/hydraulic studies and preliminary design. The project site includes seven regional conveyances and coalescing alluvial fans tributary to the Eastside Dike along the Coachella Canal. Mr. McCarthy completed regional hydrology studies for the 50.6 square mile watershed, and 1D and 2D flood routing analyses to support the technical studies and identified the recommended improvements and project mitigation measures for the project site development. Mr. McCarthy identified a whole fan flood hazard management program and developed the alignment and conceptual design for seven regional channels through the site.

Morongo Wash Interim Drainage Improvements, Cathedral City, CA. Messenger Investment/CVWD. Project Manager. Responsible for technical studies and final design. Mr. McCarthy was contracted to prepared technical hydraulic design studies and prepare final PS&E for the construction of interim improvements to the Morongo Wash Channel. The improvements extend through an existing UPRR bridge and convey Morongo Wash flood waters to the Whitewater River. Michael Baker prepared 2D hydraulic models using XPSWMM 2D for the regional facilities and is completing final design, permitting, and environmental documentation. The project is being completed through an agreement with CVWD.

Travertine Flood Hazard Mitigation Plan, La Quinta, California. Travertine Corporation – Project Manager responsible for overseen the preparation of technical studies to support the drainage and flood protection master plan for a proposed 905-acre development located at the foothills of an active alluvial fan. Work included preparing pre- and post-condition hydrology for the project site and completed a geomorphic assessment of the alluvial fan activity. Work also included using a 2D model to analyze the alluvia fan flow characteristics in conjunction with applying storage and diversion strategies to mitigate potential flood damage. The results, the client established the footprint of the proposed development and recommended flood protection improvements. CVWD and the City approved the results of the Master Plan.

Years of Experience: 29

Registration

Professional Engineer – Civil,
CA #47583 – 1991

Certified Floodplain Manager –
#05-01596 – 2005

Professional Engineer – Civil,
AZ #51805 – 2010

Education

B.S., Civil Engineering, California
State Polytechnic University, San
Luis Obispo – 1989

Certificate, Light Construction
and Development Management
– 1997

Professional Affiliations

Member:

Association of State Floodplain
Managers (ASFPM)

American Society of Civil
Engineers (ASCE)

Floodplain Management
Association (FMA)

Society of American Military
Engineers (SAME)

American Council of Engineering
Companies, California (ACEC)



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

Sundance Master Plan of Drainage and Regional Flood Control Facility Design, Beaumont, CA. *Pardee Homes.* Drainage Manager. Responsible for drainage design. Mr. McCarthy prepared the drainage master plan for the Sundance Development encompassing 1,195-acres of mixed-use development. The plan identified regional and local storm drain facilities for the site, including the construction of two regional storm drain channels and multiple detention basins. Final design studies were prepared, including hydrology, hydraulics, and flood routing for the regional systems and detention basins and prepared a conditional letter of map revision and letter of map revision for the resulting floodplain modifications.

Midway City Street and Storm Drain Master Plan and Improvements. Orange County, CA. *Orange County Public Works Department* - Drainage Manager. This project includes the street and drainage planning and design for the Midway City area in an unincorporated portion of Orange County. This existing residential area is being upgraded to County standards for roadway and drainage systems. Completed hydrology and hydraulic modeling in accordance with County standards. Developed recommended on- and off-site drainage improvements. To assess the impacts associated with the installation of a new underground storm drain system, XP's version of the Storm Water Management Model (XPSWMM) was applied to assess the existing and post-project conditions. The model was developed using the underground storm drain systems and a two-dimensional surface flow component to accurately assess the project impacts.

Palos Verdes Drive East/Sunnyside Ridge Storm Drain Improvements. *City of Rancho Palos Verdes.* Drainage Manager for the preparation of plans, specifications, and cost estimates for the relocation and installation of new storm drain improvements in Palos Verdes Drive East at Sunnyside Ridge. The project included the installation of over 3,000 feet of new storm drain pipe. The pipe sizes ranged from 18- to 48-inches. The scope of work included hydrology and hydraulic studies, storm drain system layout and design, field survey, roadway improvements and traffic control, and utility research and coordination. The project was prepared to address drainage issues identified in the Palos Verdes Drive East a previous Drainage Facilities Assessment report. The study identified a preliminary alignment for the recommended improvements at the Sunnyside Ridge location. Challenges included the development and design of improvements to address hillside drainage and shoulder erosion, energy dissipation at the canyon outlet, and ROW constraints.

La Quinta Focused Drainage Studies, La Quinta, CA. *City of La Quinta.* Principal In-charge. Q3 Team members prepared hydrology and hydraulic analysis for an area of the City hardest hit by the recent extreme storm events in 2013 and 2014. The study evaluated the flood risk associated with extreme storm events, and identified potential drainage improvements to reduce future flood damage and increase public safety if or when extreme storm events occur. The Team prepared a coupled 1D and 2D hydrology and hydraulic model for the study area. Offsite hydrology was prepared using RC Hydrology Manual procedures. Onsite hydrology was evaluated using a direct rainfall method applied over the study area. The advance model was used to more accurately drainage flow paths and overflow patterns and storm water runoff volumes in the identification of appropriate storm drain infrastructure. The results of the analysis were used to develop alternatives and cost estimates for recommended improvements to reduce the flood hazard during extreme events. The project evolved into preparing drainage improvement plans along Eisenhower Drive near Fernando Drive. Mr. McCarthy was the acting Project Manager for the preparation of the design plans.

Marshburn Retarding Basin Design and Dam Inundation Study, Orange County, California. *Irvine Community Development Company.* Project Manager. Responsible for the preparation of final design to modify this regional stormwater detention basin to provide extended detention water quality storage and wetland features. Developed preliminary plans for the basin grading modifications and changes to the principal outlet facilities to accommodate the water quality storage and discharge requirements. The project included hydrology/hydraulic analyses; a preliminary design study; and the preparation of final plans, specifications, and estimates (PS&E) to modify the Marshburn Retarding Basin (Orange County Facility F16B01) to provide water quality benefits.



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

Candace Tong, PE Project Engineer

Ms. Bair has more than 5 years of design engineering and project engineering experience. Project experience includes preparation of storm drain improvement plans, specifications, and estimates, advanced hydrologic/hydraulic analyses, scour studies, FEMA and DSOD studies, basin design, and water quality studies. In recent years, Brittany's work has focused on advanced hydraulic analysis, and has become a leader in dynamic hydraulic modeling for urban area linked 1D-2D analysis. Her background in construction document preparation has helped facilitate her progression in advance modeling.

Years of Experience: 7

Registration

Civil Engineer, CA #90444

Education

B.S., University of California,
Irvine, Civil Engineering - 2014

Professional Affiliations

Member, American Society of
Civil Engineers (ASCE)

Project Experience

City of Coachella, Stormwater Master Plan, Coachella, California. Project manager for technical flood routing studies which included evaluating the entire City's drainage patterns and developing concepts to improve the current drainage deficiencies. This project was in cooperation with Coachella Valley Water District, as a part of a regional partnership with the City to identify flood control mitigation measures. The Q3 Team prepared technical hydraulic models to develop economically feasible alternatives. Using a more advanced modeling approach, Q3 was able to identify solutions that cost much less than if traditional hydrology and hydraulics were prepared.

Washington Street & Calle Tampico Drainage Alternatives and Improvements, California – City of La Quinta. Project Engineer responsible for the preparation of the dam inundation study of a High Hazard dam. Work included dam breach analysis, Inundation Map and report preparation and Emergency Action Plan (EAP) for the dam near Goleta, California. LiDAR was used with HEC-RAS 5.0 to run a two-dimensional flow analysis on the embankment. Different dam failure modes were analyzed, as well as the downstream impacts the existing structures, including California Highway. Evacuation routes and time of wave arrival maps were prepared in accordance with the EAP.

Whitewater Rivers Crossings Project, California. The Kiner Group. Project Engineer responsible for preparing preliminary plans for proposed channel improvements to support a 60-percent plan set submittal. Her work included creating base sheets, coordinating with the developer's consultants, attend project meetings and prepare the Preliminary Design Report. Work also included providing support for the HEC-RAS models created to identify potential project impacts.

Lazar Property Flood Hazard Evaluation, Rancho Mirage, California – MSA Consulting. Project Engineer responsible for preparing a 2-dimension modeling analysis of the Clients proposed improvements. Currently, the property is within a mapped FEMA floodplain. Brittany is running XPSWMM 2D to evaluate alternative grading options to not adversely impact the existing floodplain and the surrounding properties. Using an existing model provided by CVWD, Brittany transferred the data into XPSWMM 2D and extended the limits of the model to encompass the site.

3. Project Understanding & Approach

Project Understanding

FAMD has solicited proposals from qualified firms for engineering services for the evaluation and to development of alternative flood control solutions at three locations near the main vehicular access to the Indian Wells Country Club development. The RFP requests firms to evaluate the three locations and identify their capacity and deficiencies. For those areas deficient, develop concept mitigation measures for future design and implementation.

Q3 Consulting has reviewed the sites. Watershed 1, is tributary to Manitou and Sioux Drive locations in the Manitou Springs area, and Watershed 2 is tributary to the Quail Run Lane site, in the Sandpiper Cove area. Both areas have been flooded over the past few years, namely the August 2013 and September 2014 storm events. These storm events cause substantial flooding within these two watersheds, turning streets into muddy rivers.

Watershed 1 (Manitou Springs)

The drainage conveyance system for the Manitou Springs development site consist primarily of street flow. For the area tributary to the Manitou Drive project location, storm runoff generally flows along the west side of Manitou Drive, flowing from south to north eventually discharging into Deep Canyon Channel just south of the bridge. The remainder of the flows in the Watershed 1 area drain to the Sioux Drive project site (east side), where it is conveyed to Deep Canyon Channel. Runoff from the Santa Rosa mountains south of the development (upstream) drain into the golf course, where it splits and runs around the development into Deep Canyon Channel. During large storm events, runoff from the Santa Rosa mountains drains into the Manitou Springs development. It is suspected that during large events, there may be multiple locations where mountain runoff from the golf course enters the development, with the main area of entry at Blackhawk Drive.



Debris from the September 2014 Storm

In 2023, the City worked with FAMD to construct a debris basin at the west end of Blackhawk Drive, just at the mouth of the canyon. Based on last year's storm events, the basin performed reasonably well, especially for sediment trapping, allowing some runoff to spill into the development via Blackhawk Drive. Although, the winter was relatively "wet" in 2023, the storms were not as intense as those that occurred in 2013 and 2014.

Although the new basin appears to have reduced the debris and flooding issue during large storm events, flows still will enter the development during large storm events and should be analyzed for mitigation.

Watershed 2 (Sandpiper Cove)

The drainage conveyance system for the Sandpiper Cove area is also reliant on street conveyance for its primary drainage system. Similar to the Manitou Springs watershed (Watershed 1), storm runoff flows from south to north, from the foothills of the Santa Rosa mountains ultimately to the Deep Canyon Channel. At the top of the development, flows from the mountains are conveyed in the golf course, splitting flows around the development. Some of the mountain runoff travels into the development from the east, where it eventually is conveyed into the golf course lake. The lake serves as a low point, but

as seen in storm video footage from the September 2014 event, the lake filled up and spilled into the residential streets.

Mountain runoff along the west of the development is conveyed in the golf course, adjacent to Quail Run Lane. The video footage also showed flows traveling down Quail Run at depths over 2 feet. Below is a snapshot from the video that was taken on Quail Run just south of Seminole Road. The quantity of this silt-laden flow is an indication that the flows most likely came from the Santa Rosa mountains.



Quail Run Lane, September 9th, 2014

Some studies have already been prepared for this watershed, in particular the golf course lake. Discussion with City staff suggest a drain pipe may be added to alleviate some of the ponding. Q3 will include this in our models to show how the entire watershed is impacted, and if a more feasible method or pipe size can be used.

Another area that experiences chronic flooding is near Dove Road and Quail Run Lane. This location is relatively flat and has experience ponding during storm events. This may be a location where an additional drainage inlet could eliminate the ponding.

Watershed 3 (Club Terrace)

The Club Terrace area includes homes that are directly adjacent to the Santa Rose Mountains. Unlike the homes in the other two watersheds, there is no golf course buffer to reduce direct mountain runoff. Consequently, during large storm events, flows cascade off the sides of the mountains and into many of the lots. Evaluations of potential flood mitigation measures for this area may include private property mitigation measures to allow flows to move between the buildings. Street conveyance capacity will be evaluated to identify when and where to place potential flow capture devices.

Historical Flooding

The August 2013 and the September 2014 storm events were extreme events, yet their storm durations were relatively short. The August 2013 storm event was approximately a 2-hour event, whereas the September 2014 event was just over 1 hour. This is important when considering a design storm duration for this project. The typical Riverside County 100-year storm event is based on durations of 1-, 3-, 6- or 24-hours. The longer duration storm events will produce more volume, but the shorter durations will produce higher peak flowrates. This is generally the case in watersheds that have steep terrain, such as the Santa Rosa Mountains. Q3 will evaluate all County durations to identify the highest peak flow rates.

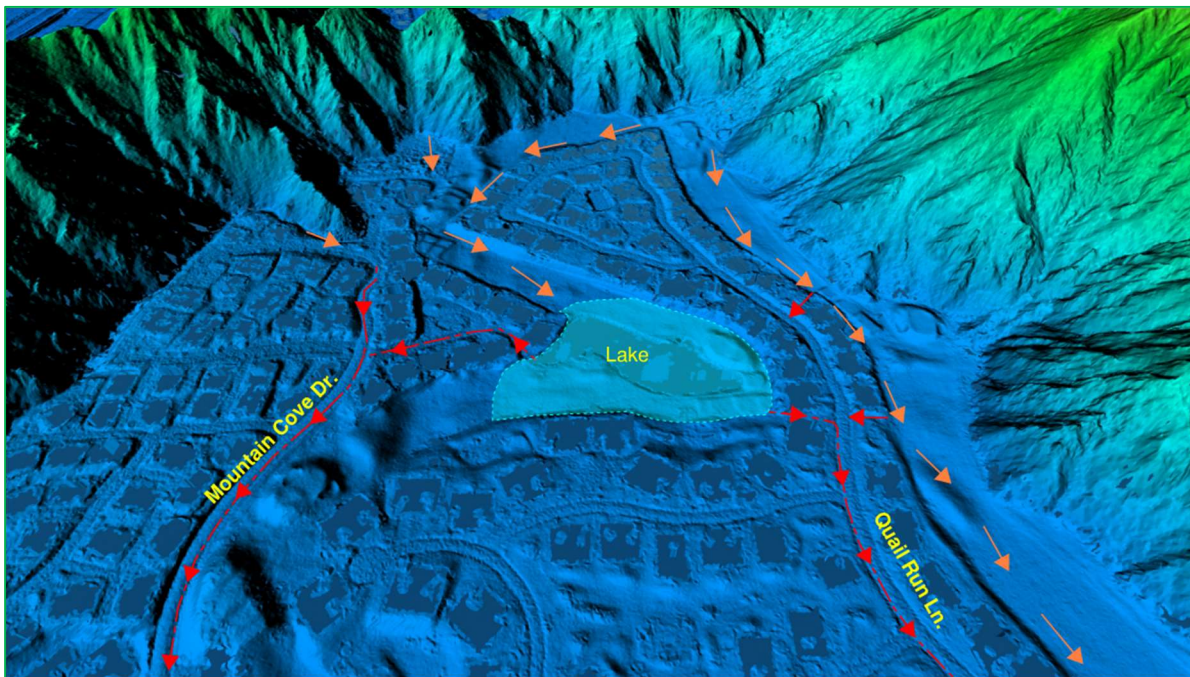
Project Goals

One of the primary goals of this project is to reduce the flooding at the specified locations to allow emergency vehicle access to the three development sites. Manitou Drive is the only access point to the Manitou Springs development, and Quail Run Lane is the only access to the Sandpiper Cove area. If these streets are flooded, ingress and egress is not possible. Based on the historical photos and videos, mitigating the flood waters at these specific locations may not solve the problem of emergency vehicle access, since the rest of the streets would still be flooded. Q3 proposes to understand where the offsite flows are entering the developments and provide solutions at the source.

Key Issues

The Q3 Team has identified several key issues and critical design elements that will influence the project. A brief description of these issues are provided below and are resolved in the Scope of Work.

Need for and Advanced Hydraulic Model – Based on the available historical flood photos and videos, it is apparent that much of the flooding source is coming from offsite. The design of the proposed improvements will need to take this into consideration, as standard hydrology of the tributary drainage areas within the development will not account for the total flows for the 100-year storm event. Identifying how flows breach different areas of the golf course does not lend itself to traditional hydraulic models, as this requires a complex analysis. Traditional models will oversize drainage solutions that could end up costing double what it should.



Watershed 2 - 3D Surface Showing Possible Locations Where Offsite Flow Co-mingle With Onsite.

At the base of the Santa Rosa Mountains, near the southernmost tip of Watersheds 1 and 2 developments, flows are split and routed down the golf course fairways. To accurately account for how much flow is diverted down each fairway, and potentially into the developments, a complex analysis should be performed for the varying flow levels during the storm event. It is important to understand how much flow is currently (existing condition) diverted down each fairway so any proposed improvements can be evaluated to ensure we are not “moving” the flood problems to another site.

To accurately account for the flows coming into the development, and to analyze the impacts of recommend alternative solutions, an advanced complex model is needed. Q3 proposes to use Innovyze’s XPSWMM 2D software (or approved equivalent) to evaluate each watershed. The model will show how and where the flows from the mountains are getting into the development. This allows us to quickly identify mitigation measures that can be vetted to ensure no adverse impacts are incurred. The graphic above shows the surface that is input into the XPSWMM 2D model. Subsurface storm drains are also coded into the model to create a linked 1D/2D model. Hydrology is performed using a rain on grid approach using Riverside County guidelines allowing the surface contours to produce the runoff. This method was used in the La Quinta Focused Drainage Study (2019).

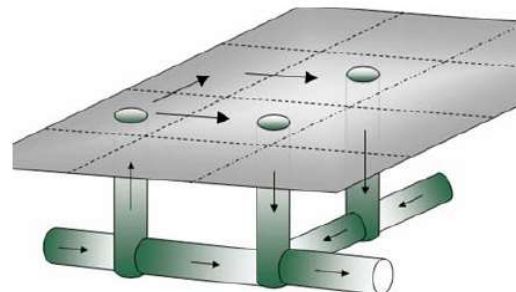
Golf Course Impacts – The Indian Wells CC golf course is a high-end facility with a rich history of tournaments. Drainage solutions that require improvements within the golf course will not sit well with the members, residents, or the course owner. It is imperative that the engineer understand the political impacts of proposed solutions within the course. The Q3 engineers have a long history of working with golf course architects to incorporate flood control features within the golf course. Understanding the mindset of golf course architects and owners can be frustrating to an engineer that does not have experience working with them. Q3 has worked successfully with multiple well-known architects to create less intrusive design alternatives that do not impact the aesthetic goals of the architect.

Comprehensive Model Approach – When dealing with a drainage “system” that has multiple diversions and runoff sources it is almost impossible to do with standard or traditional hydrologic and hydraulic models. It requires numerous model runs to be stitched together to yield a result. When introducing a design modification, or new alternative for mitigation, it requires a full re-run of all the models. This approach was the “norm” several years ago and required great book keeping skills. Today’s advance models now allow the engineer to develop one comprehensive model that encompasses all the complex calculations in a single run. When modifications are made, a single new run will produce the results. This approach makes evaluating multiple alternatives quicker and more precise. Q3 uses several 2D models and are industry leaders in XPSWMM 1D/2D. We have successfully used 2D models in multiple areas of the Coachella Valley, namely La Quinta, Rancho Mirage, Palm Desert, and Cathedral City.

Approach

Based on the video footage of the September 9th, 2014 storm event, and discussions with representatives from FAMD, it is apparent that flows from the Santa Rosa mountains are tributary to all three areas. The mountains tributary to the development contain steep canyons that, during large storm events, discharge substantial amounts of flow onto the golf course. To accurately understand how much flow breaches the golf course and gets diverted into the development, a 2-dimensional model will be utilized. Q3 proposes to use a linked 1-dimensional (storm drains)/2-dimensional (surface flow) model to evaluate the entire drainage watershed, which includes the mountains down to the Deep Canyon Stormwater Channel, including any proposed drainage improvement at the Sandpiper Cove golf course lake.

Q3 proposes to use Innovyze’s XPSWMM advanced hydraulic model for the evaluation of the sites. A single comprehensive model will be created that encompasses hydrology and hydraulics in one model. Similar to what was used in the La Quinta Focused Drainage Study, a distributed rainfall model will be used that allows for a rain-on-grid approach. Q3 intends on using rain gage data from the September 9th, 2014 storm to validate the model against known flooded areas (based on storm photos and video compiled from research). Once correlated, the Riverside County 100-year rainfall pattern will be used to evaluate the drainage system. This study may produce alternative locations to direct flows to the golf course, or potentially identify drainage solutions within and around the golf course that could contain flows from the adjacent hillsides.



XPSWMM Linked Surface (2-D) to Subsurface (1-D) Model.

The Q3 Consulting team members have completed advanced 1D/2D models for numerous projects throughout California, especially in the Coachella Valley. We understand the complex modeling procedures and methodologies to complete the analysis and identify the most feasible flood control solutions. Q3 Consulting has reviewed the project sites, along with the downstream areas of potential impact. Through

our understanding of the project needs and the Riverside County Hydrology requirements, we have developed a technical approach for the project for Phase 1.

The technical approach is a **five-step process** based upon evaluating and addressing the key elements necessary to identify a solution to flood issues in both watersheds.

The **first step** of the analysis will be to collect all the available information, including topographical data for the project area, mean operating level data of the lake located in Watershed 2, local rain gage data, downstream facilities, and complete a field review of the site conditions, including the golf course. The Q3 Consulting team will acquire and verify available as-built plans for the site drainage facilities and the downstream channel system. Topographic data will be processed to create a 3D surface for the XPSWMM model.

The **second step** of the process will be to perform an existing conditions analysis for both watershed using known rainfall data (i.e. September 2014 storm data). Hydrology will be prepared using a rain-on-grid approach. Loss rates will be calculated and implemented into the rainfall data to produce effective runoff. All drainage features will be incorporated into the models, which includes subsurface storm drains, inlets, and the lake outlet structure.

The **third step** of the process will be to validate the model by correlating the existing conditions model results to actual known storm depths. Q3 will most likely use the 2014 storm event since there are several snapshots and videos that can be used to establish known maximum flow depths. These depths will be checked against the model results to ensure the models are functioning properly. If the models are off, modifications to the parameters are required until the depths match. Once the models have been validated, the 100-year storm event will be run for the existing conditions.

The **fourth step** involves proposed improvements. Once the existing design storm (in this case the 100-year) is run, the deficient areas will become noticeable. Q3 will then begin identifying mitigation measures by running several iterations of the models to identify a select few alternatives to discuss with the City.

The **fifth step** involves coordination with the City to identify a solution that aligns with the goals of the project and is within budget. This step is often the most important and requires a presentation to the FAMD staff and other stakeholders. Q3 will prepare a Preliminary Design Report to identify our recommended solution based on the comments. This document will serve as the basis of design for future design improvements.



Known Water Depth



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

Scope of Services

Our detailed scope of services for the Drainage Evaluation and Design project is based on the requirements in the RFP to document our approach to complete the work.

Task 0.1 Kickoff Meeting

Q3 will conduct a Phase 1 Kick-Off meeting with the City to discuss project objectives, project schedule, potential design issues, research data requests, and City strategies. Q3 will identify the lines of communication for the project and protocols for data requests outside of the City.

Task 1 Baseline Data Acquisition & Review

Q3 will obtain and perform cursory review of the existing available technical studies from the City, FAMD, CWVD or other agencies related to the area hydraulics, hydrology investigations, hydrologic data, as-built plan information, and recent storm videos and photography. The researched information will serve as the foundation to perform the engineering technical analysis.

Task 2 Existing Drainage Facility Inventory and Field Investigation

Develop an inventory of the existing drainage facilities and characteristics within the two watersheds. The inventory will be used to develop the existing conditions hydrology and hydraulic analyses. To understand what is tributary to these three locations, each drainage facility must be identified in the upstream reaches. Existing construction drawings provided by the City or other agencies will be used to obtain specific characteristics about the facilities including geometry and vertical/horizontal alignments. A field reconnaissance review will be conducted to evaluate the information in the data base and to understand upstream locations of potential offsite flows (i.e. areas at the base of the foothills).

Task 3 Topographic Surface Data Processing

Q3 intends on using the available FEMA LiDAR public data for the general watershed surface topography. The data was flown in 2011 and is available in raw, unformatted .las files. Q3 will process this data to create a digital terrain model for each of the two watersheds. Some drainage features will not be included in this data, such as storm drain outlets, narrow channels, or headwalls. Q3 will supplement this data with City as-built plans to create a detailed surface model. An estimated 20 man-hours are budgeted for the formatting and development of the three projects' surfaces, which include the insertion of the recently constructed basin.

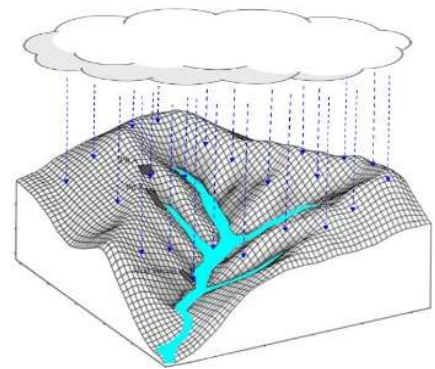
It is anticipated that for this project, no detailed survey will be needed.

Task 4 Existing Conditions Hydrologic & Hydraulic Analysis (XPSWMM)

Task 4.1 Hydrologic Analysis

Hydrology will be performed for the three watersheds; 1) Area tributary to Manitou and Sioux Drive, 2) Area tributary to Quail Run, and 3) Area tributary to Club Terrace and Desi Drive. . The 100-year storm has been selected for evaluation using the Riverside County methodology. At each site, the governing duration will be selected based on calculated worst case scenario (1hr, 3hr, 6hr, or 24hr). Watershed drainage areas for the mountainous areas will be delineated based on what is tributary to the project location.

Hydrologic routing and channel routing elements (streets and golf course fairways) will be integrated into the models based on the different features identified in the watershed mapping. Portions of the watersheds are subject to distributary flow (or flows from one subarea comingling with flows from adjacent subareas), which creates significant challenges for typical hydrologic modeling. As a result, Q3 proposes to use a rain-on-grid hydrology approach (or distributed rainfall modeling) for the entire watershed, similar to what was done on the La Quinta Focused Drainage Study in 2018. Q3 will use actual gaged rainfall data from the 2014 storm event and the 100-year precipitation based on Riverside County methodology to establish the precipitation depth on grid and to calculate the associated loss rates. The results of the hydrologic models will be evaluated as part of validation process comparing with consistency to (where available) gage data, measured runoff yields, or known ponding elevations within the project sites. The model parameters may be adjusted as part of the validation process.



Rain-On-Grid Hydrology

Task 4.2 Existing Conditions Hydraulic Analyses

A full hydraulic evaluation will be prepared for each of the two watersheds sites from the south end of the development at the foothills to the project locations. The evaluation will include the impacts of the golf course at the base of the foothills and calculate how the runoff splits from the golf course to potentially into the development. An existing conditions analysis will be prepared to identify flows tributary to the project sites identified in the RFP and to validate the hydraulic models by correlating the results to known or similar flood data. All drainage systems with diameters larger than 12-inch will be included in the model to understand the impact they have on the design storm runoff.

Task 4.3 Model Validation

The Q3 Team will correlate the design flood events to previous storm events, as best as possible. Using photographs or known maximum water surface elevations, Q3 will validate depths of flows using photo and video correlation at several locations to help verify patterns in calculated hydraulic results.

Task 5 Proposed Alternatives Hydraulic Analyses (XPSWMM)

A full hydraulic evaluation will be prepared for the three watersheds.

Task 5.1 Concept Alternatives Hydraulic Calculations

Q3 will develop a range of conceptual alternative approaches and solutions which will serve as a toolkit to draw from in order to formulate the different “systems” alternatives. Based on video footage from the 2014 storm event, there may be multiple locations where flows from the golf course enter the development. Q3 will identify where berms are needed and their impact to downstream residents. XPSWMM allows the modeler to make modifications to multiple locations simultaneously since it is a single comprehensive model. Proposed improvements and associated impacts can be identified quickly and accurately. The alternative formulation process will conceptually identify the range of potential alternatives that can be screened to the most feasible alternatives. Q3 will coordinate with the City, to select a recommended alternative.

XPSWMM 1-D/2-D analyses will be used to size alternative facilities given the City design requirements for maximum street-level flooding extents. Q3 will also work with FAMM to understand maximum street flooded widths for their emergency vehicles.

Q3 will develop an exhibit for each of the alternatives showing the potential flood impacts. A color depth results graphic overlaid on an aerial photograph of each alternative will be produced.

Task 5.2 Planning Level Construction Costs

A Rough Order Magnitude (ROM) construction cost estimate will be prepared for the flood protection facilities and features of the concept alternatives. Rough Order Magnitude (ROM) construction cost estimate for the different facilities will be prepared based (upon the proposed alternative evaluations) on an initial quantity estimate from the “conceptual layouts” for each alternative. Preliminary estimates of construction quantities will be based the concept plan layout and the cross section geometry used in the hydraulic analysis. The cost estimate will be based on current unit cost estimate and include appropriate “allowances” for this level of planning and screening cost estimate. Cost will include estimates for land Right of Way based on unit cost provided by the City. It is anticipated that two alternatives will be prepared for each of the three sites identified in the RFP.

Task 6 Project Report and Exhibits

Q3 will provide the engineering services for the preparation of a Preliminary Design Report to support the proposed recommended drainage and flood control facility alternatives for each of the three sites. The written report and appendices can serve as the technical documentation for the preliminary engineering design and selection of the recommend watershed improvements. This report shall include the background for the hydraulics, watershed investigation, hydrologic modeling, hydrologic analysis, design criteria, constraints, design assumptions, references, floodplain evaluation, flood protection requirements. The report will identify the physical project constraints, potential construction issues, technical criteria, assumptions, and guidelines in the preliminary engineering phase of the project. FAMD’s chosen alternative at each site will be developed into a concept exhibit (plan view only). The exhibit will contain estimated invert elevations, facility size/geometry and general horizontal alignment. Future (not part of this study) design plans will include detailed alignments, utility locations, and profiles.

Task 7 Client and Agency Project Meetings & Coordination

Q3 will perform coordination, communication, and technical consultation with the City/watershed stakeholders during the technical investigation and planning process for the development of the Study. This item includes meetings at regular intervals to discuss the progress of the study and provide clarifications to assist the project planning. This item provides for regular phone discussion and correspondences to update the status of the project. This Task has been budgeted for three (3) project meetings. Anticipated meetings include (but are not limited to) one (1) progress meeting, and one (1) final meeting with the City staff. If needed Q3 will provide services for additional meetings per a separate addendum.

Clarifications

- No FEMA floodplain revisions are required or included
- Drainage As-builts will be provided by City/Client.
- Concept Plans will be Plan View Only.

Schedule

The following schedule provides the timelines for the tasks outlined in the Scope of Services.



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

Drainage Evaluation and Design Schedule.

Task No.	Name	Start Date	End Date
0.1	NTP and Kick-off Meeting	February 26	June 7
1	Baseline Data Acquisition & Review	February 27	March 5
2	Facility Inventory & Field Investigation	March 5	March 8
3	Topographic Surface Data Processing	March 8	March 15
4	Existing Conditions H&H (XPSWMM)	March 18	April 9
5	Proposed Alternatives Hydraulics Analysis	April 9	May 10
6	Project Report & Exhibits	May 10	June 7




REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis

4. Cost Proposal

A detailed cost proposal for the tasks outlined in the Scope of Services is included below. The cost proposal includes a detailed fee estimate breakdown provided by task, staff category, and hours.

Street Drainage Analysis FAMD #1

January 25, 2024

		Labor Hours and Rates					TOTAL HOURS	TOTAL FEE
Project Team Role:		Project Director QA/QC	Senior Project Manager	Senior Technical Manager	Project Engineer	Engineer		
Billable Rate :		John McCarthy	Tom Ryan	Howard Barndt	Candace Tong			
		\$275	\$245	\$238	\$195	\$179		
Tasks								
Preliminary Engineering								
0.1	Kickoff Meeting		6		6		12	\$2,640.00
1	Baseline Data Acquisition & Review		2		12	6	20	\$3,904.00
2	Existing Drainage Facility Inventory & Field		6		16	8	30	\$6,022.00
3	Topographic Surface Data Processing			1	8		9	\$1,798.00
4	Existing Conditions Hydrologic & Hydraulic Modeling							
4.1	Hydrologic Analysis		2	6	20		28	\$5,818.00
4.2	Existing Conditions Hydraulic Analysis		4	4	40		48	\$9,732.00
4.3	XPSWMM Model Validation		6	8	20		34	\$7,274.00
5	Proposed Alternatives Hydraulic Analyses							
5.1	Concept Alternatives Hydraulic Calculations	1	8	4	40		53	\$10,987.00
5.2	Planning Level Construction Costs		2		8		10	\$2,050.00
6	Project Report and Exhibits	1	16	4	16	8	45	\$9,699.00
7	Phase 1 Meetings & Coordination		10		10		20	\$4,400.00
	Subtotal	2	62	27	196	22	309	\$64,324.00
Reimbursables (Printing/Mileage)								\$1,000.00
Total Hours and Fee		2	62	27	196	22	309	\$65,324.00
Percent of Hours:		0.6%	20.1%	8.7%	63.4%	7.1%	100.0%	
Optional Task Items								

Notes: ¹ It is assumed Q3 can acquire grading plans for new debris basin.

ATTACHMENTS

Proof of Insurance



REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES Street Drainage Analysis



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
8/3/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION** IS **WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER AssuredPartners Design Professionals Insurance Services, LLC 3697 Mt. Diablo Blvd Suite 230 Lafayette CA 94549	CONTACT NAME: Dani Schulze PHONE (A/C No. Ext): 714-202-0390 FAX (A/C No.): E-MAIL ADDRESS: CertsDesignPro@AssuredPartners.com
INSURED Proactive Engineering Consultants 200 S. Main Street, Suite 300 Corona CA 92882	INSURER(S) AFFORDING COVERAGE INSURER A: Aspen Specialty Insurance Company INSURER B: Citizens Insurance Company of America INSURER C: Hanover American Insurance Company INSURER D: Allmerica Financial Benefit Insurance Company INSURER E: INSURER F:

COVERAGES		CERTIFICATE NUMBER: 1467109475		REVISION NUMBER:			
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.							
INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
B	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y	Y	OBFJ100553	8/7/2023	8/7/2024	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (If a occurrence) \$1,000,000 MED EXP (Any one person) \$5,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$4,000,000 PRODUCTS - COMP/OP AGG \$4,000,000 \$
D	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	Y	Y	AWFJ100189	8/7/2023	8/7/2024	COMBINED SINGLE LIMIT (If a accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$0	Y	Y	OBFJ100553	8/7/2023	8/7/2024	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000 \$
C	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y	N/A	WZPJ100538	8/7/2023	8/7/2024	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
A	Professional Liability			AAAE300254-03	8/7/2023	8/7/2024	Per Claim Aggregate Limit \$2,000,000 \$2,000,000
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) Umbrella Liability policy is a follow-form underlying General Liability/Auto Liability/Employers Liability. Proof of coverage(s) for use on proposals. An Actual certificate will be issued at the request of the above Named Insured.							

CERTIFICATE HOLDER	CANCELLATION 30 Day Notice of Cancellation
FOR PROPOSAL USE ONLY	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

ACORD 25 (2016/03)

The ACORD name and logo are registered marks of ACORD

© 1988-2015 ACORD CORPORATION. All rights reserved.