

SUBMITTAL TO THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT BOARD OF SUPERVISORS COUNTY OF RIVERSIDE, STATE OF CALIFORNIA



FROM: General Manager-Chief Engineer

SUBMITTAL DATE: January 14, 2014

SUBJECT:

Consulting Services Agreement for Mockingbird Canyon Wash Geomorphology Study

Project No. 2-6-00870

District 1/District 1 [\$216.951.80]

RECOMMENDED MOTION: That the Board of Supervisors:

- Approve the Consulting Services Agreement (Agreement) between the District and JE Fuller/Hydrology & Geomorphology, Inc. (Consultant); and
- 2. Authorize the Chairman to execute the Agreement on behalf of the District; and
- Authorize the General Manager-Chief Engineer to extend time for performance for an additional year, if necessary; and
- Authorize the General Manager-Chief Engineer to sign amendments that do not change the 4. substantive terms of the Agreement, including amendments to the compensation provision that do not exceed ten percent (10%) of the total contract amount of \$216.951.80.

[Continue on page 2]

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WARREN D. WILLIAMS General Manager-Chief Engineer

FINANCIAL DATA	Current Fiscal Year:		Next Fiscal Year:		Total Cost:		Ongoing Cost:		POLICY/CONSENT (per Exec. Office)
COST	\$	123,823.10	\$	93,128.70	\$	216,951.80	\$	N/A	Consent □ Policy □
NET DISTRICT COST	\$	123,823.10	\$	93,128.70	\$	216,951.80	\$	N/A	Consent - Policy -
SOURCE OF FUNDS: 25120 947420 525440 Budget Adjustment: NO									

(Zone 2 - Const/Maint/Misc - Professional Services)

For Fiscal Year: 13/14; 14/15

C.E.O. RECOMMENDATION:

APPROVE

County Executive Office Signature

Steven C. Horn, MPA

MINUTES OF THE BOARD OF SUPERVISORS

Positions Added Change Order П

4/5 Vote

SON OWN - A VANILLE IN

Prev. Agn. Ref.:

District:1st/1st

Agenda Number:

SUBMITTAL TO THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT BOARD OF SUPERVISORS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

FORM 11: Consulting Services Agreement for Mockingbird Canyon Wash Geomorphology Study

Project No. 2-6-00870

District 1/District 1 [\$216,951.80]

DATE: January 14, 2014

PAGE: Page 2 of 2

[Continued from page 1]

BACKGROUND:

Summary

This Consulting Services Agreement sets forth the terms and conditions by which the Consultant shall provide professional consulting services for the Mockingbird Canyon Wash Geomorphology Study.

Over the last 40 years, Mockingbird Canyon Wash (Wash) has experienced significant erosion, deposition and flooding problems. Mockingbird Canyon Road, which is the primary access for some residents near the Mockingbird Canyon Wash area, becomes impassable during severe storm events. In addition, existing public utilities as well as the District's existing levee system located within the area are subject to significant damages repeatedly. The District wishes to develop a better understanding of the causes of these erosion, deposition and flooding problems and to identify specific measures that, if implemented, would stabilize the Wash and alleviate flood-related damages. These measures would be incorporated into a conceptual level management/remediation plan that could be implemented in a phased approach through the District's capital improvement program.

County Counsel has approved the Agreement as to legal form and Consultant has executed the Agreement.

Impact on Citizens and Businesses

This study is funded by ad-valorem property tax revenue and entails no new fees, taxes or bonded indebtedness to citizens and businesses.

SUPPLEMENTAL:

Additional Fiscal Information

Sufficient funding is available in the District's Zone 2 budget for FY 2013-2014 and will be included in the proposed budget for FY 2014-2015, as necessary.

Contract History and Price Reasonableness

Pursuant to County Board Policy H-7, on July 25, 2013, the District mailed a Request for Proposal (RFP) to various engineering services firms. A public notice of the RFP was published in The Press Enterprise and The Desert Sun on July 31, 2013 and the RFP was also made available to the public on the District's internet site from July 25, 2013 through August 29, 2013.

Seven (7) firms submitted proposals in response to the RFP. A Selection Committee comprised of District office staff was established to review the RFP submittals. All qualifying submittals were evaluated based on pre-established criteria such as responsiveness to the RFP, scope of work, past performance, qualifications, relevant experience, feasibility and cost. JE Fuller/Hydrology & Geomorphology, Inc. met the District's requirements and was the highest ranked respondent in overall scoring after evaluation of all of the proposals submitted for consideration in the RFP process.

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CONSULTING SERVICES AGREEMENT

Mockingbird Canyon Wash Geomorphology Study Project No. 2-6-00870

The RIVERSIDE COUNTY **FLOOD** CONTROL AND WATER CONSERVATION DISTRICT, hereinafter called "DISTRICT", and JE FULLER/HYDROLOGY & GEOMORPHOLOGY, INC., an Arizona corporation, hereinafter called "CONSULTANT", hereby agree as follows:

- PROJECT CONSULTANT shall perform consulting services for the project described as the Mockingbird Canyon Wash Geomorphology Study (Project No. 2-0-00870) in accordance with applicable federal, state, and local laws and regulations.
- 2. SCOPE OF SERVICES DISTRICT hereby retains CONSULTANT, as an independent contractor, to provide expertise, tools, equipment, facilities, materials, labor, and other incidental services necessary to perform in a complete, skillful and professional manner those consulting services, as further described in the "Scope of Services", attached hereto as Exhibit "A" and made a part hereof.

By entering into this Agreement, CONSULTANT assumes responsible charge of the work pursuant to Section 6703 of the Professional Engineers Act; Chapter 7 of Division 3 of the Business and Professions Code and shall be wholly responsible for the completeness and accuracy of all data, technical studies, reports, specifications and estimates prepared pursuant to this Agreement, and shall check all such material accordingly.

3. <u>TIME FOR PERFORMANCE</u> – CONSULTANT agrees that it will diligently and responsibly pursue the performance of work and services in accordance with the "Project Schedule", attached hereto as Exhibit "B" and made a part hereof. The term of this Agreement shall start on the date the Agreement is executed by DISTRICT'S

Board of Supervisors, and end on December 31, 2014 with an option for one (1) additional one-year extension upon mutual written consent of DISTRICT and CONSULTANT. CONSULTANT shall not commence performance of any work or services, for any reason whatsoever, until DISTRICT has provided CONSULTANT with a written Notice to Proceed authorizing CONSULTANT to initiate work pursuant to this Agreement. No payment will be made for any work or services performed prior to issuance of said Notice of Proceed.

- 4. <u>COMPENSATION</u> DISTRICT shall pay CONSULTANT for services satisfactorily performed and expenses incurred in accordance with the standard rates and fee schedule as set forth on Exhibit "C" attached hereto and made a part hereof. The total amount paid to CONSULTANT under this Agreement shall not exceed two hundred sixteen thousand nine hundred fifty-one dollars and eighty cents (\$216,951.80).
- 5. PAYMENT CONSULTANT shall invoice DISTRICT for completion of "Tasks" as shown on Exhibit "C" based on a lump sum payment not to exceed for each deliverable upon delivery or performance of said tasks. Upon satisfactory performance of CONSULTANT'S services as set forth herein, DISTRICT shall pay CONSULTANT within thirty (30) days after receipt of appropriate invoice(s) from CONSULTANT. CONSULTANT shall keep employee and expense records according to customary accounting methods and such records shall, upon request, be made available for inspection by DISTRICT to verify the invoices of CONSULTANT. Except as specifically provided for and stated in this Agreement or Exhibit "C", DISTRICT shall not be responsible for payment of any of CONSULTANT'S expenses related to this Agreement.

- 6. <u>LICENSES</u> CONSULTANT, its employees, agents, contractors and subcontractors shall possess appropriate Federal and/or State permits and maintain professional licenses required by the applicable Federal, State and local regulations at all times while performing services under this Agreement.
- may be required to allow CONSULTANT to perform the proposed consulting services within and upon privately-owned property. All permits and rights of entry as may be required from any and all affected public entities shall be obtained by CONSULTANT. Sufficient evidence of having obtained such permits and/or rights of entry shall be furnished to DISTRICT by CONSULTANT, prior to initiation of work. CONSULTANT will prosecute the work in such a manner as to minimize public inconvenience and possible hazard, and will restore the streets and other work areas to their original condition and former usefulness as soon as practicable. CONSULTANT shall be responsible for the protection of public and private property adjacent to the work and shall exercise due caution to avoid damage to such property.
- 8. <u>SUBCONTRACTS</u> CONSULTANT may, at CONSULTANT'S own expense, employ special consultants to accomplish the work covered by this Agreement, however, except as specifically provided in Exhibits "A" and "C" or as expressly identified in this Agreement, no portion of the services pertinent to this Agreement shall be subcontracted without prior written approval and authorization by DISTRICT.

In the event CONSULTANT subcontracts any portion of CONSULTANT'S duties under this Agreement, CONSULTANT shall require its subcontractors to comply with the terms of this Agreement in the same manner as required of CONSULTANT. The

fact that CONSULTANT employs special consultants not in his regular employ shall not relieve CONSULTANT of any responsibility regarding the adequacy of the special consultant's designs or other work performed pursuant to this Agreement.

9. <u>NOTICES</u> - Any and all notices sent or required to be sent to the parties of this Agreement will be mailed by first class mail, postage prepaid, to the following addresses:

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
1995 Market Street
Riverside, CA 92501
Attn: Planning Section
Edwin Quinonez

JE FULLER/HYDROLOGY & GEOMORPHOLOGY, INC. 1 W. Deer Valley Road, Suite 101 Phoenix, AZ 85027 Attn: Nate Vaughan

10. <u>INSURANCE</u> - CONSULTANT shall not commence operations until DISTRICT has been furnished with original certificate(s) of insurance and original certified copies of endorsements and if requested, certified original policies of insurance including all endorsements and any and all other attachments as required in this Section. Without limiting or diminishing CONSULTANT'S obligation to indemnify or hold DISTRICT harmless, CONSULTANT shall procure and maintain or cause to be maintained, at its sole cost and expense, the following insurance coverage's during the term of this Agreement:

A. Workers' Compensation:

If CONSULTANT has employees as defined by the State of California, CONSULTANT shall maintain statutory Workers' Compensation Insurance (Coverage A) as prescribed by the laws of the State of California. Policy shall include Employers' Liability (Coverage B) including Occupational Disease with limits not less than \$1,000,000 per person per accident. Policy shall be endorsed

to waive subrogation in favor of DISTRICT and, if applicable, to provide a Borrowed Servant/Alternate Employer Endorsement.

B. <u>Commercial General Liability</u>:

Commercial General Liability insurance coverage, including but not limited to, premises liability, unmodified contractual liability, products and completed operations liability, personal and advertising injury, and cross liability coverage, covering claims which may arise from or out of CONSULTANT'S performance of its obligations hereunder. Policy shall name the Riverside County Flood Control and Water Conservation District, the County of Riverside, its agencies, districts, special districts, and departments, their respective directors, officers, Board of Supervisors, employees, elected or appointed officials, agents or representatives as additional insureds. Policy's limit of liability shall not be less than \$1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this Agreement or be no less than two (2) times the occurrence limit.

C. Vehicle Liability:

If vehicles or mobile equipment are used in the performance of the obligations under this Agreement, then CONSULTANT shall maintain liability insurance for all owned, non-owned or hired vehicles so used in an amount not less than \$1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this Agreement or be no less than two (2) times the occurrence limit. Policy shall name the Riverside County Flood Control and Water Conservation District, the County of Riverside, its agencies, districts, special districts, and departments, their respective directors, officers, Board of Supervisors, employees, elected or appointed officials, agents or representatives as additional insureds.

D. <u>Professional Liability</u>:

CONSULTANT shall maintain Professional Liability Insurance providing coverage for CONSULTANT'S performance of work included within this Agreement, with a limit of liability of not less than \$1,000,000 per occurrence and \$2,000,000 annual aggregate. If CONSULTANT'S Professional Liability Insurance is written on a claims made basis rather than an occurrence basis, such insurance shall continue through the term of this Agreement and CONSULTANT shall purchase at his sole expense either 1) an Extended Reporting Endorsement (also known as Tail Coverage); or 2) Prior Dates Coverage from a new insurer with a retroactive date back to the date of, or prior to, the inception of this Agreement; or 3) demonstrate through Certificates of Insurance that CONSULTANT has maintained continuous coverage with the same or original insurer. Coverage provided under items: 1), 2) or 3) will continue as long as the law allows.

E. General Insurance Provisions – All Lines:

- 1. Any insurance carrier providing insurance coverage hereunder shall be admitted to the State of California and have an A.M. BEST rating of not less than an A: VIII (A: 8) unless such requirements are waived, in writing, by the County Risk Manager. If the County Risk Manager waives a requirement for a particular insurer, such waiver is only valid for that specific insurer and only for one policy term.
- 2. CONSULTANT must declare its insurance self-insured retention for each coverage required herein. If any such self-insured retention exceed \$500,000 per occurrence each such retention shall have the prior written consent of the County Risk Manager before the commencement of

operations under this Agreement. Upon notification of self-insured retention deemed unacceptable to DISTRICT and at the election of the County Risk Manager, CONSULTANT'S carriers shall either: 1) reduce or eliminate such self-insured retention with respect to this Agreement with DISTRICT, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.

3. CONSULTANT shall cause their insurance carrier(s) to furnish DISTRICT with 1) a properly executed original Certificate(s) of Insurance and certified original copies of Endorsements effecting coverage as required herein; and 2) if requested to do so orally or in writing by the County Risk Manager, provide original certified copies of policies including all Endorsements and all attachments thereto, showing such insurance is in full force and effect. Further, said Certificate(s) and policies of insurance shall contain the covenant of the insurance carrier(s) that thirty (30) days written notice shall be given to DISTRICT prior to any material modification, cancellation, expiration or reduction in coverage of such insurance. In the event of a material modification, cancellation, expiration or reduction in coverage, this Agreement shall terminate forthwith, unless DISTRICT receives, prior to such effective date, another properly executed original Certificate of Insurance and original copies of Endorsements or certified original policies, including all endorsements and attachments thereto, evidencing coverages set forth herein and the insurance required herein is in full force and effect. An

individual authorized by the insurance carrier to do so on its behalf shall sign the original endorsements for each policy and the Certificate of Insurance.

- 4. It is understood and agreed by the parties hereto that CONSULTANT'S insurance shall be construed as primary insurance, and DISTRICT'S insurance and/or deductibles and/or self-insured retentions or self-insured programs shall not be construed as contributory.
- 5. If, during the term of this Agreement or any extension thereof, there is a material change in the scope of services; or there is a material change in the equipment to be used in the performance of the scope of work which will add additional exposures (such as the use of aircraft, watercraft, cranes, etc.); or the term of this Agreement, including any extensions thereof, exceeds five (5) years, DISTRICT reserves the right to adjust the types of insurance and the monetary limits of liability required under this Agreement, if, in the County Risk Manager's reasonable judgment, the amount or type of insurance carried by CONSULTANT has become inadequate.
- 6. CONSULTANT shall pass down the insurance obligations contained herein to all tiers of subcontractors working under this Agreement.
- 7. The insurance requirements contained in this Agreement may be met with a program(s) of self-insurance acceptable to DISTRICT.
- 8. CONSULTANT agrees to notify DISTRICT of any claim by a third party or any incident or event that may give rise to a claim arising from the performance of this Agreement.

11.

INDEMNIFICATION – CONSULTANT shall indemnify and hold harmless DISTRICT (including its officers, Board of Supervisors, elected and appointed officials, employees, agents and representatives) from any liability, claim, damage, proceeding or action, present or future, based upon, arising out of or in any way relating to CONSULTANT'S (including its officers, employees, subcontractors and agents) actual or alleged negligent, reckless or willful misconduct, acts or omissions related to this Agreement, performance under this Agreement, or failure to comply with the requirements of this Agreement, including but not limited to: (a) property damage; (b) bodily injury or death; or (c) any other element of any kind or nature whatsoever.

CONSULTANT shall defend, at its sole expense, including all costs and fees (including but not limited to attorney fees, cost of investigation, defense and settlements or awards), DISTRICT (its officers, Board of Supervisors, elected and appointed officials, employees, agents and representatives) in any claim, proceeding or action for which indemnification is required.

With respect to any of CONSULTANT'S indemnification requirements, CONSULTANT shall, at its sole cost, have the right to use counsel of their own choice and shall have the right to adjust, settle, or compromise any such claim, proceeding or action without the prior consent of DISTRICT; provided, however, that such adjustment, settlement or compromise in no manner whatsoever limits or circumscribes CONSULTANT'S indemnification obligations to DISTRICT.

CONSULTANT'S indemnification obligations shall be satisfied when CONSULTANT has provided to DISTRICT the appropriate form of dismissal (or

similar document) relieving DISTRICT from any liability for the claim, proceeding or action involved.

The specified insurance limits required in this Agreement shall in no way limit or circumscribe CONSULTANT'S obligations to indemnify and hold harmless DISTRICT from third party claims.

In the event there is conflict between this section and California Civil Code Section 2782, this section shall be interpreted to comply with California Civil Code Section 2782. Such interpretation shall not relieve CONSULTANT from indemnifying DISTRICT or the County of Riverside to the fullest extent allowed by law. The obligations reflected in this Section shall survive the discharge or other termination of this Agreement.

12. WORK PRODUCT - CONSULTANT shall provide all data, materials, engineering analyses, report(s) and other documents as set forth in Exhibit "A". All work products or deliverables furnished under this Agreement shall be and remain the sole property of DISTRICT. CONSULTANT shall not publish or transfer any material produced or resulting from activities supported by this Agreement without the prior written consent of the General Manager-Chief Engineer. If any such material is subject to copyright or trademark, the parties agree that the right to any and all copyright and/or trademark in and to the material is expressly reserved to DISTRICT. If any such material is copyrighted, the parties hereto understand and agree that DISTRICT reserves a royalty-free, non-exclusive, and irrevocable license to reproduce, publish, and use such material, in whole or in part, and to authorize others to do so, provided written credit is given the author.

ONSULTANT from unauthorized use and disclosure. The only exception to this shall be if disclosure is approved in advance in writing by DISTRICT or if the disclosure is made to CONSULTANT'S subcontractors as anticipated by this Agreement.

CONSULTANT shall not issue any news release or public relations item regarding designated confidential information or CONSULTANT'S work under this Agreement, without prior review of the contents and written approval by DISTRICT.

These same requirements shall be applicable to any of CONSULTANT'S subcontractors. CONSULTANT shall include the requirements stated in this section in the agreement with any of its subcontractors.

- 14. <u>TERMINATION</u> At any time during the term of this Agreement, DISTRICT may:
 - A. Terminate this Agreement without cause upon providing CONSULTANT thirty (30) days written notice stating the extent and effective date of termination; or
 - B. Upon five (5) days written notice, terminate this Agreement for CONSULTANT default, if CONSULTANT refuses or fails to comply with the provisions of this Agreement or fails to make progress so as to endanger performance and does not cure such failure within a reasonable period of time. In the event of such termination, DISTRICT may proceed with the work in a manner deemed proper to DISTRICT.

2.5

In the event DISTRICT issues a Notice of Termination, CONSULTANT shall i) stop all work under this Agreement on the date specified in the Notice of Termination; and ii) transfer to DISTRICT and deliver in the manner, and to the extent, if any, as directed by DISTRICT, any equipment, data or reports which, if the Agreement had

been completed, would have been required to be furnished to DISTRICT.

In the event DISTRICT terminates this Agreement, DISTRICT shall make payment for all services performed in accordance with this Agreement to the date of termination, a total amount which bears the same ratio to the total maximum fee otherwise payable under this Agreement as the services actually bear to the total services necessary for performance of this Agreement. Notwithstanding any of the other provision of this Agreement, CONSULTANT rights under this Agreement shall terminate (except for fees accrued prior to the date of termination) upon dishonesty, or a willful or material breach of this Agreement by CONSULTANT; or in the event of CONSULTANT'S unwillingness or inability for any reason whatsoever to perform the duties hereunder; or if the Agreement is terminated pursuant to Section 21 (NON-DISCRIMINATION). In such event, CONSULTANT shall not be entitled to any further compensation under this Agreement. The rights and remedies of DISTRICT provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

- 15. <u>ASSIGNMENT</u> Neither this Agreement nor any part thereof shall be assigned by CONSULTANT without the prior written consent of DISTRICT.
- 16. <u>CONFLICT OF INTEREST</u> CONSULTANT covenants that it presently has no interest, including but not limited to, other projects or independent contracts, and shall not acquire any such interest, direct or indirect, which would conflict in any manner

or degree with the performance of services required to be performed under this Agreement. CONSULTANT further covenants that in the performance of this Agreement, no person having any such interest shall be employed or retained by it

under this Agreement.

PREVAILING WAGE – All workers shall be paid not less than the general prevailing wage rate of wages and benefits for work of a similar character in the locality in which the work is performed, as provided in Labor Code Sections 1770 et seq. Pursuant to the Labor Code, DISTRICT has obtained for the Board of Supervisors of DISTRICT from the Director of the Department of Industrial Relations, State of California, his determinations of general prevailing rates of per diem wages applicable to the work and for holiday and overtime work, including employer payments for health and welfare, pension, vacation, apprentices and similar purposes for each craft, classification or type of workman needed, as set forth on the schedule which is on file at DISTRICT'S office and which will be made available to any interested person upon request.

- 18. <u>INDEPENDENT CONTRACTOR</u> CONSULTANT and the agents and employees of CONSULTANT shall act at all times in an independent capacity during the term of this Agreement and in the performance of the services to be rendered hereunder and shall not act as or shall not be and shall not in any manner be considered employees or agents of DISTRICT.
- 19. <u>JURISDICTION/LAW/SEVERABILITY</u> This Agreement is to be construed in accordance with the laws of the State of California. If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void or

unenforceable, the remaining provisions shall be declared severable and shall be given full force and effect to the extent possible.

Any legal action, in law or equity related to the performance or interpretation of this Agreement shall be filed only in the Superior Court of the State of California located in Riverside, California, and the parties waive any provision of law providing for a change of venue to another location. Prior to the filing of any legal action, the parties shall be obligated to attend a mediation session with a neutral mediator to try to resolve the dispute.

- 20. <u>WAIVER</u> Any waiver by DISTRICT of any breach of any one or more of the terms of this Agreement shall not be constructed to be a waiver of any subsequent or other breach of the same or any other term thereof. Failure on the part of DISTRICT to require exact, full and complete compliance with any terms of this Agreement shall not be construed as in any manner changing the terms hereof, or estopping DISTRICT from enforcement hereof.
- 21. <u>NON-DISCRIMINATION</u> In the performance of the terms of this Agreement, CONSULTANT shall not engage in nor permit others he may employ to engage in discrimination in the employment of persons because of the race, color, national origin or ancestry, religion, physical handicap, disability as defined by the Americans with Disabilities Act (ADA), medical condition, marital status, age or sex of such persons, in accordance with the provision of California Labor Code Section 1735.
- 22. NON-APPROPRIATION OF FUNDS It is mutually agreed and understood that the obligation(s) of DISTRICT are limited by and contingent upon the availability of DISTRICT funds for the reimbursement of CONSULTANT'S fees. In the event that such funds are not forthcoming for any reason, DISTRICT shall immediately notify

CONSULTANT in writing. This Agreement shall be deemed terminated and have no further force and effect immediately on receipt of DISTRICT'S notification by CONSULTANT. In the event of such termination, CONSULTANT shall be entitled to reimbursement of its costs in accordance with Section 4 (COMPENSATION) and Section 5 (PAYMENT).

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		157687						
1	IN WITNESS WHEREOF, the parties hereto	have executed this Agreement on						
2								
3	(to be filled in by Clerk of the Board)							
4		THE CONTRACT CONTRACT OF CONTRACT						
5	RECOMMENDED FOR APPROVAL:	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT						
6								
7	WARREN D. WILLIAMS	By MARION ASHLEY, Chairman						
8	General Manager-Chief Engineer	Riverside County Flood Control and Wate Conservation District Board of Supervisor						
10	APPROVED AS TO FORM:	ATTEST:						
11	PAMELA J. WALLS	KECIA HARPER-IHEM						
12	County Counsel	Clerk of the Board						
13	, 0, 10							
14	By What P HONG	By						
15	NEAL R. KIPNIS Deputy County Counsel	Deputy						
16		(SEAL)						
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25	Consulting Services Agreement for							
26	Project No. 2-6-00870							
27	12/18/13 TT:blj							
28								

JE FULLER/HYDROLOGY & GEOMORPHOLOGY, INC.

By

Vice President

Consulting Services Agreement for Mockingbird Canyon Wash Geomorphology Study Project No. 2-6-00870 12/18/13 TT:blj

Exhibit "A" - Scope of Services

To: Edwin

Edwin Quinonez

Date: December 5, 2013

Engineering Project Manager

Riverside County Flood Control and Water Conservation District

From: Nathanael Vaughan, PE

Project Manager/Engineer

JE Fuller/Hydrology & Geomorphology, Inc.

1 W. Deer Valley Rd., Ste. 101

Phoenix, AZ 85027

nate@jefuller.com; 928-640-0778

Re: Mockingbird Canyon Wash Geomorphology Study – Scope and Fee

RCFCWCD Project No. 4-6-00852

Thank you for requesting professional engineering services from JE Fuller/Hydrology & Geomorphology, Inc. (JEF) and RBF Consulting (RBF), together referred to below as the Project Team. This letter outlines the project understanding, proposed scope of services, engineering services fee, schedule, deliverables, and project assumptions associated with the Mockingbird Canyon Wash Geomorphology Study (Study).

1 Project Understanding

Areas within the Mockingbird Canyon Wash reach between the Mockingbird Canyon Reservoir (downstream) and the Pennington Place Bridge (upstream) routinely experience erosion, deposition and flooding problems. It is believed that these problems are in response to a variety of floodplain encroachments and land use changes that have occurred within the watershed over the past few decades. The Riverside County Flood Control and Water Conservation District (District) wishes to develop a better understanding of the causes of these problems and identify specific measures that if implemented, would stabilize the wash and alleviate flood damages. These measures would be incorporated into a conceptual level management/remediation plan that could be implemented in a phased approach.

More detailed project goals and a history of Mockingbird Canyon Wash were provided with the Request for Proposal as Attachments "B" and "C", respectively.

2 Scope of Services

In order to develop conceptual stabilization measures for the subject reach of Mockingbird Canyon Wash, the District outlined the following tasks in Attachment "E" of the Request for Proposal: Initial Assessment, Hydrologic Analysis, Existing Condition Hydraulic and Sediment Transport Analyses, Stabilization Plan and Hydraulic and Sediment Transport Analyses and Alternative Residential Access Analysis. The scope of services to be completed by the Project Team for each of these tasks is discussed below in more detail.

2.1 Task 1 - Initial Assessment

2.1.1 Task 1.A – Review of Historical Documentation

District-provided historical documentation will be compiled and reviewed. Historical documentation may include:

- Photographs and aerial photography.
- Topographic mapping. It is believed the District has the following topographic mapping:
 2012 LiDAR data, aerial photographs and DTM; orthophotography contours (digital) from the 1980's; and contours from the 1970's in .PDF file format.
- Geotechnical reports for existing levee.
- As-built drawings for existing levee and roadway and bridge improvements. As-built drawings residing with the County Transportation Department will be obtained by the District.
- Riverside City's proposed Dredging Plan for Mockingbird Canyon Reservoir.
- Historical rainfall data and hydrologic/hydraulic reports and modeling.
- Regulatory floodplains.
- High water marks associated historic flood events.

The historical documentation review will be summarized in an Initial Assessment Report.

2.1.2 Task 1.B – Field Reconnaissance and Geomorphic Assessment

A field reconnaissance will be conducted to document existing channel conditions and likely flood and sedimentation problems. The field reconnaissance will be documented, including photographs, in the *Initial Assessment Report*.

2.1.3 Task 1.C - Prepare Thalweg Profiles

Thalweg profiles based on District-provided topographic information will be prepared and provided in the *Initial Assessment Report*.

2.1.4 Task 1.D - Geomorphic Assessment

A geomorphic assessment will be conducted to better understand the geologic features and landforms within the watershed and the geomorphic processes taking place within the channel and overbank areas. The geomorphic assessment will be documented, including photographs, in the *Initial Assessment Report*.

2.1.5 Task 1.E - Geotechnical Investigation

A geotechnical investigation of the channel will be conducted to establish grain size distributions for use in sediment transport analysis. The geotechnical investigation will consist of hand-dug sampling at up to 10 locations (approximately 5 gallons per location) and laboratory sieve analyses for each sample.

Based on field reconnaissance observations, a low-resolution map of surface soils found along the channel will be prepared.

Geotechnical investigation findings, which will include a discussion regarding channel material erodibility, will be provided in the *Initial Assessment Report*.

2.1.6 Task 1.F - Sediment Yield Analysis

A sediment yield analysis will be conducted to estimate the volume and concentration of sediment influx under existing conditions. Results from the analysis will be used in the development of the existing condition sediment transport model, as well as the evaluation of proposed stabilization alternatives. The sediment yield analysis will be documented in the *Initial Assessment Report*.

2.1.7 Task 1.G - Preparation of Initial Assessment Report

Tasks 1.A - 1.F will be documented in the *Initial Assessment Report*. The *Initial Assessment Report* will present summary and analysis of initial findings and will be submitted in hard copy (1) and digital pdf format.

2.2 <u>Task 2 – Hydrologic Analysis</u>

2.2.1 Task 2.A - Review of Hydrologic Analysis

The District will prepare a Synthetic Unit Hydrograph hydrologic analysis for the Mockingbird Canyon Wash watershed tributary to the Mockingbird Canyon Reservoir. Storm events to be modeled include the 2-, 5-, 10-, 25-, 50-, and 100-year storms. Concentration points will be located at key locations along the wash.

The Project Team will provide a cursory review of the hydrologic analysis and provide written comments in memorandum format to the District. Hydrologic modeling results will be used as inflow data for hydraulic and sediment transport modeling. Based on the preliminary hydraulic and sediment transport modeling results, and observations from the field reconnaissance, the Project Team will provide the District with additional comments (memorandum format) regarding the hydrologic analysis.

2.3 Task 3 – Existing Condition Hydraulic and Sediment Transport Analyses

2.3.1 Task 3.A - Existing Condition HEC-RAS Hydraulic Analysis

The Project Team will conduct an existing condition, unsteady, HEC-RAS hydraulic analysis of the subject reach of Mockingbird Canyon Wash. Hydrographs used for inflow will be obtained from the District's Synthetic Unit Hydrograph hydrologic analysis (Task 2.A). Channel cross-sections and profile will be modeled based on District-provided topographic data. Manning's n-value, boundary conditions, expansion and contraction coefficients, and ineffective flow areas will be modeled based on field reconnaissance, aerial photographs, and available topographic data. Structures modeled in HEC-RAS will be based on District-provided as-built drawings or field measurements obtained during field reconnaissance.

2.3.2 Task 3.B – Existing Condition HEC-RAS Sediment Transport Analysis

The Project Team will conduct an existing condition HEC-RAS sediment transport analysis of the subject reach of Mockingbird Canyon Wash. The sediment transport analysis will be performed

utilizing a storm series as recommended by the Project Team, and agreed upon by the District. The intent of the analysis is to examine long term trends of scour and deposition. The analysis will include supporting discussion for the modeling parameters utilized such as: sediment transport equation (e.g. Yang, Ackers-White, Laursen, etc.), grain size distribution, boundary conditions including sediment supply assumptions, Manning's n values, expansion and contraction coefficients, ineffective flow areas, etc. The results of the analysis will be compared to the scour and deposition patterns as they currently exist, and have been historically documented, within the subject reach.

2.3.3 Task 3.C – Existing Condition Hydraulic and Sediment Transport Analyses Report

Tasks 3.A and 3.B will be documented in an *Existing Condition Hydraulic and Sediment Transport Analyses Report*. The *Existing Condition Hydraulic and Sediment Transport Analyses Report* will be submitted in hard copy (1) and digital pdf format.

2.4 Task 4 - Stabilization Plan and Hydraulic and Sediment Transport Analyses

2.4.1 Task 4.A – With-Project HEC-RAS Hydraulic Analysis

The Project Team will conduct with-project condition, unsteady, HEC-RAS hydraulic analyses of preliminary stabilization alternatives for the subject reach of Mockingbird Canyon Wash. The FINAL with-project condition HEC-RAS hydraulic model will assume full implementation of the FINAL Recommended Alternatives (Task 4.E). Hydrographs used for HEC-RAS inflow will be obtained from the District's Synthetic Unit Hydrograph hydrologic analysis (Task 2.A). Channel cross-sections and profile will be modeled based on District-provided topographic data and recommended stabilization alternatives. Manning's n-value, boundary conditions, expansion and contraction coefficients, and ineffective flow areas will be modeled based on field reconnaissance, aerial photographs, and available topographic data. Structures modeled in HEC-RAS will be based on District-provided as-built drawings or field measurements obtained during field reconnaissance.

2.4.2 Task 4.B – With-Project HEC-RAS Sediment Transport Analysis

The Project Team will conduct with-project condition HEC-RAS sediment transport analyses of preliminary stabilization alternatives for the subject reach of Mockingbird Canyon Wash. The FINAL with-project condition HEC-RAS sediment transport model will assume full implementation of the FINAL Recommended Alternatives (Task 4.E). The sediment transport analysis will be performed utilizing a storm series as recommended by the Project Team, and agreed to by the District (Task 2.A). The intent of the analysis is to examine long-term trends of scour and deposition as well as to make an estimate of sediment delivery to the Mockingbird Reservoir assuming full implementation of the recommended improvements. The analysis will include supporting discussion for the modeling parameters utilized such as: sediment transport equation (e.g. Yang, Ackers-White, Laursen, etc.), grain size distribution, boundary conditions including sediment supply assumptions, Manning's n values, expansion and contraction coefficients, ineffective flow areas, etc.

2.4.3 Task 4.C – Demonstration of Stability at Critical Locations

The Project Team will demonstrate that at critical locations (e.g. crossings, levees, grade control structures, etc...) the wash will be stable during the 100-year storm event, assuming full implementation of the FINAL Recommended Alternatives (Task 4.E). The approach for demonstrating wash stabilization will be approved by the District.

2.4.4 Task 4.D – Sediment Balance Analysis

The Project Team will perform a sediment balance analysis per the Equilibrium Slope Methodology as described in the following guideline:

 Arizona Department of Water Resources; Design Manual for Engineering Analysis of Fluvial Systems; March 1985.

The purpose of the *Design Manual for Engineering Analysis of Fluvial Systems* is to present techniques and procedures that may be used to make a thorough engineering analysis of major fluvial systems in order that the natural processes associated with such systems can be accounted for in the design of flood control projects.

The equilibrium slope is defined as the slope at which the channel sediment transporting capacity is equal to the incoming sediment supply. The equilibrium slope methodology is utilized to evaluate long-term channel response (aggradation/degradation), specifically, the slope the channel ultimately wants to achieve.

2.4.5 Task 4.E - Proposed Improvements Ranking/Prioritization Process

Based on Tasks 4.A – 4.D, the Project Team will develop a Recommended Alternatives Matrix to evaluate and rank flood mitigation, stream stabilization and residential access alternatives with the District and identified key stakeholders. The Recommended Alternatives Matrix will be used to score each alternative based on an agreed upon selection of weighted evaluation factors. The FINAL Recommended Alternatives will be based on scoring of proposed alternatives. Alternatives will take into account potential concurrent implementation, as well as improvements that could be implemented independent from the others.

2.4.6 Task 4.F – Conceptual Level, 100-Scale Stabilization Plan for Recommended Alternative(s)

The Project Team will prepare a conceptual level 100-scale stabilization plan for the wash within the study limits. The plan will depict the locations and extents of FINAL Recommended Alternatives (Task 4.E), including removals, replacements, and modifications to the wash geometry. The conceptual plan will include conceptual level details drawn to scale for the FINAL Recommended Alternative(s). The Project Team will consider factors such as minimizing impacts to existing habitat as well as opportunities for habitat enhancement, providing for maintenance access to stabilization measures such as grade control structures, and providing access for existing residential lots.

2.4.7 Task 4.G - Preliminary Cost Estimate for Recommended Alternative(s)

The Project Team will prepare a preliminary cost estimate for the FINAL Recommended Alternatives (Task 4.E). The preliminary cost estimate is to include right-of-way acquisition and construction costs.

2.4.8 Task 4.H - Recommended Alternatives Wash Stabilization Report

Tasks 4.A - 4.G will be documented in the Recommended Alternatives Wash Stabilization Report. The Recommended Alternatives Wash Stabilization Report will be submitted in hard copy (1) and digital pdf format.

2.5 Task 5 - Alternative Residential Access Analysis

2.5.1 Task 5.A - Alternative Residential Access Analysis

The Project Team will prepare an analysis of alternative means of access to the existing residential lots to the southwest of Mockingbird Canyon Wash between the intersections of Mockingbird Canyon Road and Van Buren Boulevard and Mockingbird Canyon Road and Greenview Drive. The goal of this analysis is to determine if there is a way to reduce the number of encroachments into the wash that have been constructed for the purpose of accessing the residential lots. Based on the analysis, a FINAL Alternate Residential Access alternative will be selected by the Project Team and District.

2.5.2 Task 5.B - Preliminary Cost Estimate for FINAL Alternative Residential Access

Per the alternatives access analysis, the Project Team will prepare a preliminary cost estimate for implementation of FINAL Alternative Residential Access. The cost estimate will include right-of-way acquisition and construction costs.

2.5.3 Task 5.C - Alternative Residential Access Analysis Report

Tasks 5.A and 5.B will be documented in the *Alternative Residential Access Analysis Report*. The *Alternative Residential Access Analysis Report* will be submitted in hard copy (1) and digital pdf format.

2.6 Task 6 - Project Management

2.6.1 Task 6.A - Milestone and Project Progress Meetings

Milestone Meetings will be held at the completion of Tasks 1-5. Project Progress Meetings will be held on an as needed basis, between Milestone Meetings. Milestone and Project Progress Meetings will typically be held via teleconference and/or WebEx.

2.6.2 Task 6.B - Stabilization Alternatives Meeting

A Stabilization Alternatives Meeting will be held at the District as part of Task 4.E – Proposed Improvements Ranking/Prioritization Process.

2.6.3 Task 6.C - Alternative Residential Access Plan Meeting

An Alternative Residential Access Plan Meeting will be held at the District as part of Task 5.

2.6.4 Task 6.D - General Coordination

Weekly Project Progress Memorandums and/or Emails will be provided to the District Project Manager to document project progress, schedule and budget.

3 Project Team

The Project Team is comprised of JEF and RBF. JEF is the prime firm and will be responsible for Tasks 1-4. RBF will be responsible for Task 5. JEF's project manager, Nathanael (Nate) Vaughan, P.E., will be the principal engineer and is the primary contact and will lead the performance of the tasks.

4 Engineering Services Fee

Fee for the engineering services outlined above shall be based on a lump sum contract with a total fee of \$216,951.80. The attached Engineering Services Fee Worksheet summarizes the estimated lump-sum fee for professional services and direct expenses.

The project will be billed on a completed-task basis (as determined by submittals/RCFCD reviews and approvals) as outlined in the Project Schedule and Engineering Services Fee Worksheet (attached).

5 Schedule

The Project Team will complete Tasks 1 – 6 (Section 2) within 28 Weeks of Notice-to-Proceed.

6 Deliverables

The following deliverables will be provided to the District upon completion of associated tasks:

- Task 1 Initial Assessment Report will be submitted in hard copy (1) and digital pdf format.
- Task 2 Comments regarding District-provided Hydrologic Analysis (memorandum format) will be submitted in digital pdf format.
- Task 3 Existing Condition Hydraulic and Sediment Transport Analyses Report will be submitted in hard copy (1) and digital pdf format.
- Task 4 Recommended Alternatives Wash Stabilization Report will be submitted in hard copy (1) and digital pdf format; Conceptual level 100-scale stabilization plan for FINAL Recommended Alternatives in hard copy (1) and digital pdf format; and Preliminary cost estimate for FINAL Recommended Stabilization Alternatives in hard copy (1) and digital pdf format.
- Task 5 Alternative Residential Access Analysis Report will be submitted in hard copy (1) and digital pdf format.

7 Project Assumptions

The following project assumptions are associated with the above scope, schedule and fee estimates:

- Data required for hydrologic and hydraulic calculations and modeling will be readily available and/or provided by the District.
- All DRAFT submittals will be in digital pdf format.
- The District will require a two-week review period per DRAFT submittal.
- All design drawings will be conceptual. No detailed design drawings will be developed.
- All cost estimates are based on a conceptual design level.