

FORM APPROVED COUNTY COUNSEL
 DATE 9/11/14
 BY: GREGORY P. PRAMOS
 FISCAL PROCEDURES APPROVED
 JEANINE J. REY, FINANCE DIRECTOR
 BY: Jeanine J. Rey 9/8/14
 JEANINE J. REY
 Departmental Concurrence

**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:
 September 30, 2014

SUBJECT: Approval of Multi-Year Consulting Services Agreement for Whitewater River-Right Bank Levee Certification, Project No. 6-0-00250; District 4,4/District 5,4; [\$407,419 total]; District Funds 100%

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve the Multi-Year Consulting Services Agreement between the District and Tetra Tech, Inc. (Consultant); and
2. Authorize the Chairman to execute the Agreement documents on behalf of the District.

BACKGROUND:

Summary

The Agreement sets forth the terms and conditions by which Consultant will provide professional engineering services in support of District's levee certification effort for the Whitewater River-Right Bank Levee.

Continued on page 2

P8/163474
 AMR:blm

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	\$ 200,000	\$ N/A	\$ 407,419	\$ N/A	Consent <input type="checkbox"/> Policy <input type="checkbox"/>
NET DISTRICT COST	\$ 200,000	\$ N/A	\$ 407,419	\$ N/A	

SOURCE OF FUNDS: 25160 947500 525440 Zone 6 Professional Services
Budget Adjustment: No
For Fiscal Year: 14/15-18/19

C.E.O. RECOMMENDATION:

APPROVE
 BY:
 Steven C. Horn

County Executive Office Signature

MINUTES OF THE BOARD OF SUPERVISORS

- A-30
- 4/5 Vote
- Positions Added
- Change Order

Prev. Agn. Ref.: District: 4th/4th, 5th/4th **Agenda Number:**

11-5

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

FORM 11: Approval of Multi-Year Consulting Services Agreement for Whitewater River-Right Bank
Levee Certification, Project No. 6-0-00250. District 4,4/5,4; [\$407,419 total]; District
Funds 100%

DATE: September 30, 2014

PAGE: Page 2 of 2

BACKGROUND:

Summary (continued)

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

Impact on Residents and Businesses

Costs incurred under this Agreement will be funded by ad-valorem property tax revenue and entails no new fees, taxes or bonded indebtedness to residents and businesses.

SUPPLEMENTAL:

Additional Fiscal Information

Sufficient funding is available in the District's budget for Fiscal Year 2014-2015 and will be included in the proposed budget(s) for Fiscal Years 2015-2016 through 2018-2019, as appropriate and necessary.

Contract History and Price Reasonableness

Pursuant to Board Policy H-7, on April 2, 2014, the District mailed a request for qualifications and proposals to prospective engineering firms for geotechnical and engineering analysis. The request was also published in The Press Enterprise and Desert Sun. Five engineering firms responded and Tetra Tech was selected based on relevant experience, technical competence, past performance and their proposed work plan.

AMR:blm

- 1 3. TIME FOR PERFORMANCE - CONSULTANT shall not commence performance of
2 any work or services, for any reason whatsoever, until DISTRICT has provided
3 CONSULTANT with a written Notice to Proceed authorizing CONSULTANT to
4 initiate work pursuant to this Agreement. No payment will be made for any work or
5 services performed prior to the issuance of said Notice to Proceed. The term of this
6 Agreement shall commence on the date it is executed by DISTRICT'S Board of
7 Supervisors and shall terminate at midnight on June 30, 2017. Prior to the termination
8 of this Agreement, by mutual written consent of DISTRICT and CONSULTANT, this
9 Agreement may be extended for two (2) additional one-year terms through June 30,
10 2019.
11
- 12 4. COMPENSATION - DISTRICT shall pay CONSULTANT for actual services
13 satisfactorily performed, products provided and expenses incurred in accordance with
14 the fee rate schedule as set forth on Attachment "B" attached hereto and made a part
15 hereof. The total amount paid to CONSULTANT under this Agreement shall not
16 exceed the sum of four hundred seven thousand four hundred nineteen dollars
17 (\$407,419) over the entire term of this Agreement.
18
- 19 5. PAYMENT - Upon satisfactory performance of CONSULTANT'S services as set forth
20 herein, DISTRICT shall pay CONSULTANT within forty-five (45) days after
21 DISTRICT'S receipt of CONSULTANT'S appropriate monthly invoice(s). DISTRICT
22 shall not pay interest or finance charges on any outstanding balance(s).
23 CONSULTANT shall keep employee and expense records according to customary
24 accounting methods and such records, upon request, shall be made available for
25 inspection by DISTRICT to verify CONSULTANT'S invoice(s). All invoices shall
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1 itemize charges to conform to the portion(s) of services and costs as set forth in
2 Attachments "A" and "B".

3 Except as specifically provided for and stated in this Agreement or Attachment "B",
4 DISTRICT shall not be responsible for payment of any of CONSULTANT'S expenses
5 related to this Agreement.
6

7 6. LICENSES – CONSULTANT, its employees, agents, contractors and subcontractors
8 shall possess appropriate federal and/or state permits and maintain professional licenses
9 required by the applicable federal, state and local regulations at all times while
10 performing services under this Agreement.

11 7. PERMITS AND RIGHTS OF ENTRY - DISTRICT shall obtain all rights of entry as
12 may be required to perform the proposed services within and upon privately-owned
13 property. All permits and rights of entry as may be required from any and all affected
14 public entities shall be obtained by CONSULTANT. Sufficient evidence of having
15 obtained such permits and/or rights of entry shall be furnished to DISTRICT by
16 CONSULTANT prior to initiation of any work occurring within public rights of way.
17 CONSULTANT shall prosecute the work in such a manner as to minimize public
18 inconvenience and possible hazard, and shall restore the streets and other work areas to
19 their original condition and former usefulness as soon as practicable. CONSULTANT
20 shall be responsible for the protection of public and private property adjacent to the
21 work and shall exercise due caution to avoid damage to such property.
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23 8. NOTICES - Any and all notices sent or required to be sent to the parties of this
24 Agreement shall be mailed by first class mail, postage prepaid, to the following
25 addresses:
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1 RIVERSIDE COUNTY FLOOD CONTROL
2 AND WATER CONSERVATION DISTRICT
3 1995 Market Street
4 Riverside, CA 92501
Attn: FloodPlain Management Section

TETRA TECH, INC.
17885 Von Karman, Suite 500
Irvine, CA 92614
Attn: Ike Pace

5 9. INSURANCE – CONSULTANT shall not commence operations until DISTRICT has
6 been furnished with original certificate(s) of insurance and certified original copies of
7 endorsements and if requested, certified original policies of insurance including all
8 endorsements and any and all other attachments as required in this Section.

9 Without limiting or diminishing CONSULTANT'S obligation to indemnify or hold
10 DISTRICT harmless, CONSULTANT shall procure and maintain or cause to be
11 maintained, at its sole cost and expense, the following insurance coverages during the
12 term of this Agreement:

13 A. Workers' Compensation:

14 If CONSULTANT has employees as defined by the State of California,
15 CONSULTANT shall maintain statutory Workers' Compensation Insurance
16 (Coverage A) as prescribed by the laws of the State of California. Policy shall
17 include Employer's Liability (Coverage B) including Occupational Disease with
18 limits not less than \$1,000,000 per person per accident. Policy shall be endorsed
19 to waive subrogation in favor of DISTRICT and, if applicable, to provide a
20 Borrowed Servant/Alternate Employer endorsement.

22 B. Commercial General Liability:

23 Commercial General Liability insurance coverage, including but not limited to,
24 premises liability, unmodified contractual liability, products and completed
25 operations liability, personal and advertising injury, and cross liability coverage,
26 covering claims which may arise from or out of CONSULTANT'S performance of
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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, employees, 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, 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, elected or appointed officials, employees, agents or representatives as additional insureds.

D. Professional Liability:

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

1 Insurance is written on a claims made basis rather than an occurrence basis, such
2 insurance shall continue through the term of this Agreement and CONSULTANT
3 shall purchase at his sole expense either 1) an Extended Reporting Endorsement
4 (also known as Tail Coverage); or 2) Prior Dates Coverage from a new insurer
5 with a retroactive date back to the date of, or prior to, the inception of this
6 Agreement; or 3) demonstrate through Certificates of Insurance that
7 CONSULTANT has maintained continuous coverage with the same or original
8 insurer. Coverage provided under items: 1), 2) or 3) will continue for as long as
9 the law allows.
10

11 E. General Insurance Provisions – All Lines:

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- 13 i. Any insurance carrier providing insurance coverage hereunder shall be
14 admitted to the State of California and have an A.M. BEST rating of no less
15 than an A: VIII (A: 8) unless such requirements are waived, in writing, by
16 the County Risk Manager. If the County Risk Manager waives a
17 requirement for a particular insurer such waiver is only valid for that specific
18 insurer and only for one (1) policy term.
 - 19 ii. CONSULTANT must declare its insurance self-insured retention for each
20 coverage required herein. If any such self-insured retention exceeds
21 \$500,000 per occurrence each such retention shall have the prior written
22 consent of the County Risk Manager before the commencement of
23 operations under this Agreement. Upon notification of self-insured retention
24 deemed unacceptable to DISTRICT, and at the election of the County Risk
25 Manager, CONSULTANT'S carriers shall either: 1) reduce or eliminate such
26 self-insured retention with respect to this Agreement with DISTRICT; or 2)
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procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.

iii. 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 a minimum of thirty (30) days written notice shall be given to DISTRICT prior to any material modification, cancellation, expiration or reduction in coverage of such insurance. If CONSULTANT'S insurance carrier(s) policies do not meet the minimum notice requirement found herein, CONSULTANT shall cause CONSULTANT'S insurance carrier(s) to furnish a 30 day Notice of Cancellation Endorsement. 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.

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iv. 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.

v. 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 required under this Agreement and the monetary limits of liability for the insurance coverages currently required herein, if, in the County Risk Manager's reasonable judgment, the amount or type of insurance carried by CONSULTANT has become inadequate.

vi. CONSULTANT shall pass down the insurance obligations contained herein to all tiers of subcontractors working under this Agreement.

vii. The insurance requirements contained in this Agreement may be met with a program(s) of self-insurance acceptable to DISTRICT.

viii. 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.

10. INDEMNIFICATION – CONSULTANT shall indemnify and hold harmless DISTRICT and County of Riverside (including its agencies, districts, special districts, and departments, their respective directors, officers, Board of Supervisors, employees,

1 elected or appointed officials, employees, agents or representatives) from any liability,
2 claim, damage, proceeding or action, present or future, based upon, arising out of or in
3 any way relating to CONSULTANT'S (including its officers, employees, subcontractors
4 and agents) actual or alleged negligent, reckless or willful misconduct, acts or omissions
5 related to this Agreement, performance under this Agreement, or failure to comply with
6 the requirements of this Agreement, including but not limited to: (a) property damage;
7 (b) bodily injury or death; or (c) any other element of any kind or nature whatsoever.
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9 CONSULTANT shall defend, at its sole expense, including all costs and fees (including
10 but not limited to attorney fees, cost of investigation, defense and settlements or
11 awards), DISTRICT and County of Riverside (including its agencies, districts, special
12 districts, and departments, their respective directors, officers, Board of Supervisors,
13 employees, elected or appointed officials, employees, agents or representatives) in any
14 claim, proceeding or action for which indemnification is required.
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16 With respect to any of CONSULTANT'S indemnification requirements,
17 CONSULTANT shall, at its sole cost, have the right to use counsel of their own choice
18 and shall have the right to adjust, settle or compromise any such claim, proceeding or
19 action without the prior consent of DISTRICT; provided, however, that such
20 adjustment, settlement or compromise in no manner whatsoever limits or circumscribes
21 CONSULTANT'S indemnification obligations to DISTRICT.
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23 CONSULTANT'S indemnification obligations shall be satisfied when CONSULTANT
24 has provided to DISTRICT the appropriate form of dismissal (or similar document)
25 relieving DISTRICT from any liability for the claim, proceeding or action involved.
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1 The specified insurance limits required in this Agreement shall in no way limit or
2 circumscribe CONSULTANT'S obligations to indemnify and hold harmless DISTRICT
3 from third party claims.

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5 In the event there is conflict between this section and California Civil Code Section
6 2782, this section shall be interpreted to comply with California Civil Code Section
7 2782. Such interpretation shall not relieve CONSULTANT from indemnifying
8 DISTRICT (including its directors, officers, Board of Supervisors, elected or appointed
9 officials, employees, agents or representatives) or the County of Riverside to the fullest
10 extent allowed by law.

11
12 11. ERRORS AND OMISSIONS – In the event CONSULTANT'S data, technical studies,
13 analyses, reports or any work product performed under this Agreement contain any
14 errors or omissions that cause DISTRICT to incur additional expense beyond what
15 would have otherwise resulted if there were no errors or omissions in CONSULTANT'S
16 data, technical studies, analyses, reports, or any work products, such additional expense
17 shall be borne solely by CONSULTANT.

18
19 12. WORK PRODUCT – CONSULTANT shall provide DISTRICT with all data,
20 calculations, technical studies, analyses, reports and any other documents as set forth in
21 Attachment "A". All work products or deliverables furnished under this Agreement
22 shall be and remain the sole property of DISTRICT. CONSULTANT shall not publish
23 or transfer any material produced or resulting from activities supported by this
24 Agreement without the prior written consent of DISTRICT'S General Manager-Chief
25 Engineer. If any such material is subject to copyright or trademark, the parties agree
26 that the right to any and all copyright and/or trademark in and to the material is
27 expressly reserved to DISTRICT. If any such material is copyrighted, the parties hereto
28

1 understand and agree that DISTRICT reserves a royalty-free, non-exclusive, and
2 irrevocable license to reproduce, publish, and use such material, in whole or in part, and
3 to authorize others to do so, provided written credit is given the author.
4

- 5 13. SUBCONTRACTS – CONSULTANT may, at CONSULTANT'S own expense, employ
6 special consultants to accomplish the work covered by this Agreement however, except
7 as specifically provided in Attachment "A" or as expressly identified in this Agreement,
8 no portion of the services pertinent to this Agreement shall be subcontracted without
9 prior written approval and authorization by DISTRICT.

10 In the event CONSULTANT subcontracts any portion of CONSULTANT'S duties
11 under this Agreement, CONSULTANT shall require its subcontractors to comply with
12 the terms of this Agreement in the same manner as required of CONSULTANT. The
13 fact that CONSULTANT employs special consultants not in his regular employ shall
14 not relieve CONSULTANT of any responsibility regarding the adequacy of the special
15 consultant's designs or other work performed pursuant to this Agreement.
16

- 17 14. TERMINATION - At any time during the term of this Agreement, DISTRICT may:
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19 A. Terminate this Agreement without cause upon providing CONSULTANT thirty
20 (30) days written notice stating the extent and effective date of termination; or
21
22 B. Upon five (5) days written notice, terminate this Agreement for CONSULTANT
23 default, if CONSULTANT refuses or fails to comply with the provisions of this
24 Agreement or fails to make progress so as to endanger performance and does not
25 cure such failure within a reasonable period of time. In the event of such
26 termination, DISTRICT may proceed with the work in any manner deemed proper
27 to DISTRICT.
28

1 In the event DISTRICT issues a Notice of Termination, CONSULTANT shall (i) stop
2 all work under this Agreement on the date specified in the Notice of Termination; and
3 (ii) transfer to DISTRICT and deliver in the manner, and to the extent, if any, as
4 directed by DISTRICT, any equipment, data or reports which, if the Agreement had
5 been completed, would have been required to be furnished to DISTRICT.
6

7 In the event DISTRICT terminates this Agreement, DISTRICT shall make payment for
8 all services satisfactorily performed in accordance with this Agreement to the date of
9 termination. Notwithstanding any of the other provisions of this Agreement,
10 CONSULTANT rights under this Agreement shall terminate (except for fees accrued
11 prior to the date of termination) upon dishonesty, or a willful or material breach of this
12 Agreement by CONSULTANT, or in the event of CONSULTANT'S unwillingness or
13 inability for any reason whatsoever to perform the duties hereunder, or if the Agreement
14 is terminated pursuant to Section 20, hereinafter titled NON-DISCRIMINATION.
15

16 15. ASSIGNMENT - Neither this Agreement nor any part thereof shall be assigned by
17 CONSULTANT without the prior written consent of DISTRICT.
18

19 16. CONFLICT OF INTEREST - CONSULTANT covenants that it presently has no
20 interest in, including but not limited to, other projects or independent contracts, and
21 shall not acquire any such interest, direct or indirect, which would conflict in any
22 manner or degree with the performance of services required to be performed under this
23 Agreement. CONSULTANT further covenants that in the performance of this
24 Agreement, no person having any such interest shall be employed or retained by it
25 under this Agreement.
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27 CONSULTANT warrants, by execution of this Agreement, that no person or selling
28 agency has been employed or retained to solicit or secure this Agreement upon an

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agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by CONSULTANT for the purpose of securing business. For breach or violation of this warranty, DISTRICT has the right to annul this Agreement without liability, pay only for the value of the work actually performed, or in its discretion to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee. CONSULTANT may be requested to complete a Conflict of Interest Statement prior to, during, or after execution of this Agreement. CONSULTANT understands that as a condition of this Agreement, CONSULTANT agrees to complete the Conflict of Interest Statement when requested to do so by DISTRICT.

17. INDEPENDENT CONTRACTOR – 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.

18. JURISDICTION/LAW/SEVERABILITY – 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 for the State of California located in Riverside, California, and the parties waive any provision of law providing for a change

1 of venue to another location. Prior to the filing of any legal action, the parties shall be
2 obligated to attend a mediation session with a neutral mediator to try to resolve the
3 dispute.

4
5 19. WAIVER – Any waiver by DISTRICT of any breach of any one or more of the terms of
6 this Agreement shall not be constructed to be a waiver of any subsequent or other
7 breach of the same or any other term thereof. Failure on the part of DISTRICT to
8 require exact, full and complete compliance with any terms of this Agreement shall not
9 be construed as in any manner changing the terms hereof, or estopping DISTRICT from
10 enforcement hereof.

11 20. NON-DISCRIMINATION - In the performance of the terms of this Agreement,
12 CONSULTANT shall not engage in nor permit others he may employ to engage in
13 discrimination in the employment of persons because of the race, color, national origin
14 or ancestry, religion, physical handicap, disability as defined by the Americans with
15 Disabilities Act (ADA), medical condition, marital status or sex of such persons, in
16 accordance with the provision of California Labor Code Section 1735.

17
18 21. PREVAILING WAGE - All workers shall be paid not less than the general prevailing
19 rate of wages and benefits for work of a similar character in the locality in which the
20 work is performed, as provided in Labor Code Sections 1770 et seq. Pursuant to the
21 Labor Code, DISTRICT has obtained for the Board of Supervisors of DISTRICT from
22 the Director of the Department of Industrial Relations, State of California, his
23 determinations of general prevailing rates of per diem wages applicable to the work, and
24 for holiday and overtime work, including employer payments for health and welfare,
25 pension, vacation, apprentices and similar purposes for each craft, classification or type
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1 of workman needed, as set forth on the schedule which is on file at DISTRICT office,
2 and which will be made available to any interested person upon request.

3 22. CONFIDENTIALITY OF DATA – All technical or other data and information made
4 available to CONSULTANT shall not be disclosed (in whole or in part) by
5 CONSULTANT to any third parties and shall be protected by CONSULTANT from
6 unauthorized use and disclosure. The only exception to this shall be if disclosure is
7 approved in advance in writing by DISTRICT or if the disclosure is made to
8 CONSULTANT'S subcontractors as anticipated by this Agreement.

9
10 CONSULTANT shall refer all requests for information to DISTRICT. These same
11 requirements shall be applicable to any of CONSULTANT'S subcontractors.
12 CONSULTANT shall include the requirements stated in this section in the agreement
13 with any of its subcontractors.
14

15 23. NON-APPROPRIATION OF FUNDS - It is mutually agreed and understood that the
16 obligation(s) of DISTRICT are limited by and contingent upon the availability of
17 DISTRICT funds for the reimbursement of CONSULTANT'S fees. In the event that
18 such funds are not forthcoming for any reason, DISTRICT shall immediately notify
19 CONSULTANT in writing. This Agreement shall be deemed terminated and have no
20 further force and effect immediately on receipt of DISTRICT'S notification by
21 CONSULTANT. In the event of such termination, CONSULTANT shall be entitled to
22 reimbursement of its costs in accordance with Sections 4 and 5 (COMPENSATION and
23 PAYMENT).
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25 24. DISCREPANCY – In the event of any conflict between the terms of this Agreement
26 and Attachment "A" or Attachment "B", the terms of this Agreement shall govern. In
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the event of any conflict between Attachment "A" and Attachment "B", Attachment "A" shall govern.

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1 IN WITNESS WHEREOF, the parties hereto have executed this Agreement on

2
3 (to be filled in by Clerk of the Board)

4
5 RECOMMENDED FOR APPROVAL: **RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT**

6 By: 
7 WARREN D. WILLIAMS
8 General Manager-Chief Engineer

By: _____
MARION ASHLEY, Chairman
Riverside County Flood Control and Water
Conservation District Board of Supervisors

9
10 APPROVED AS TO FORM:

ATTEST:

11 GREGORY P. PRIAMOS
12 County Counsel

KECIA HARPER-IHEM
Clerk of the Board

13 By: 
14 NEAL R. KIPNIS
15 Deputy County Counsel

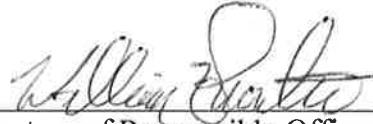
By: _____
Deputy

16 (SEAL)
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25 Multi-Year Consulting Services Agreement (FY 14/15 – FY 16/17)
26 w/Tetra Tech, Inc.
27 08/26/14
28 TT:AMR:blm

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TETRA TECH, INC.



Signature of Responsible Officer

William R. Brownlie

Printed Name

Senior Vice President, Chief Engineer and
Corporate Risk Management Officer

Title

Multi-Year Consulting Services Agreement (FY 14/15 – FY 16/17)

w/Tetra Tech, Inc.

08/26/14

TT:AMR:blm



SCOPE OF SERVICES

D.1 PROJECT UNDERSTANDING

As described in the Riverside County Flood Control and Water Conservation District (District) Request for Proposal, the Tetra Tech Team would like to provide assistance to obtain FEMA accreditation for the Whitewater River West Bank and tie-back levees. This will include:

- Performing the necessary soils, geology and geotechnical investigations to meet the requirements of Section 65.10 of the NFIP regulations and determine whether the levee meets the FEMA criteria for slope stability, foundation stability and settlement;
- Preparing a report assessing the geotechnical compliance of the levees;
- Working with WEST Consultants, Inc., to incorporate their hydrology and hydraulic findings into a report that would make recommendations to correct all levee deficiencies; and
- After the necessary levee improvements are completed, preparing the Draft and Final Levee Reports, completing Section E of FEMA's MT-2 Form 3, and submitting to FEMA.



D.2 WORK PLAN OF ACTION / RECOMMENDED SCOPE OF WORK

The following section briefly outlines the experience, resources and technical approach that the Tetra Tech Team will provide to the District for the Scope of Work presented in Attachment A of the RFP.

Task 1 – Site Visit and Levee Condition Assessment

Tetra Tech will conduct a site visit and field inspection of the Whitewater River Levee based on procedures established by the Corps of Engineers for levee inspections including rating system checklists for individual system components (e.g. Levee Embankments, Interior Drainage Systems/Culverts). Individual system components will be inspected based upon rated items (e.g. Settlement) and provided individual ratings of Acceptable, Minimally Acceptable, or Unacceptable. Field inspections will be completed with a team consisting of a geotechnical, civil/structural, and hydrologic/hydraulic engineers.

The team will walk the crown and both levee slopes/toes (when feasible) locating and recording deficiencies and collecting data. Each deficiency located in the field will include a recommendation for mitigation. Inspection deficiency locations (with photo documentation) will be recorded with the support of a Motion Tablet PC. The tablet uses ESRI ArcMap 10 software with integrated mapping-grade GPS which will allow for detailed mapping of deficiencies to aid office and field personnel in locating for maintenance and/or repairs.



Task 1 – Deliverables: A Draft field inspection summary table will be submitted to the District in electronic (Word, PDF, etc.) format for review and comment. The final field inspection summary table will be part of the Task 4 deliverable.

Task 2 – Geotechnical Investigation and Analysis

Review of Pertinent Data: Available geotechnical data will be reviewed prior to the initiation of field exploration. It is anticipated that this information will include the geotechnical investigation performed by CHJ dated 1991 and any other pertinent reports for improvements within this reach of the Whitewater River (e.g. bridge crossings, roadway modifications, utility installations). The information will be used to optimize the field exploration program by focusing in areas with limited data.

Historic aerial photography along the levee alignment will be reviewed. This task will include a search for any geologic or man-made feature that could impact the levee such as faulting, geologic contacts, historic river migration paths, evidence of bank or riverbed erosion, grading and/or mining operations, and other modifications to the river system. The planned field exploration program would then be modified in order to investigate any anomalies or areas of concern identified by the aerial photography review.

Field Exploration: The scope of the field exploration will be based on amount of pertinent existing information and on general guidelines provided in the U.S. Army Corps of Engineers Manual 1110-2-1913 Design and Construction of Levees. The manual generally recommends boring spacing of 200 to 1000 feet for preliminary engineering with additional exploration in critical design areas. Based on the assumption that there will be a fairly extensive amount of geotechnical data from previous investigations, Tetra Tech is currently proposing to drill approximately 36 borings. Combining these new borings with borings and test pits performed by CHJ will provide an average exploration spacing of roughly 700 feet. The borings are currently proposed to be drilled from the existing levee crest. However, if site conditions such as riverside toe scour or landside seepage features are encountered during the initial field inspection, then boring locations will be revised appropriately. Boring depths are expected to range from 30 to 70 feet below the top of levee elevation. Sampling will include the Standard Penetration Test (SPT) method, modified California sampler method, and collection of bulk samples. It is currently proposed to backfill the borings with excavated cuttings compacted with the drill rig hammer.

A key parameter in evaluating seepage through and under a levee embankment is the saturated hydraulic conductivity of the levee fill and foundations soils. Laboratory hydraulic conductivity testing of undisturbed samples is currently proposed, however, sample disturbance and horizontal laminations within the sample can significantly affect the test results. It is Tetra Tech's experience on other levee certification programs that in-situ hydraulic conductivity characteristics are best evaluated by performing field permeability tests. It is planned to install screened well casings within approximately 6 of the borings in order to evaluate the hydraulic conductivity of levee fill and foundation soils. Field testing will be performed by either constant or falling head tests performed within the well casings.



Laboratory Testing: Laboratory tests will be performed on samples taken during the field exploration. The testing will be performed to obtain pertinent engineering characteristics of the levee fill and foundation soils. It is anticipated that the following tests will be performed:

- Dry density/moisture content
- Consolidation potential
- Maximum dry density/optimum moisture content
- Shear strength
- Grain size analysis
- Hydraulic conductivity

Engineering Analysis:

Settlement – FEMA requirements for levee settlement (44 CFR 65.10 (b) 4) stipulate that estimated future settlement of the levee must not reduce the levee freeboard below minimum standards. Based on information in the RFP, it is Tetra Tech’s understanding that historic survey data of the levee crest is available for review. This information will be evaluated in order to provide an empirical assessment of potential future settlement of the levee. However, it should be noted that comparisons of different survey programs can often be affected by differing surveying practices, benchmarks, and other factors that can lead to discrepancies in evaluation that may be incorrectly interpreted as settlement. In addition to review of survey data, Tetra Tech intends to perform a thorough review of the consolidation potential of the foundation soils along the Whitewater River Levee alignment, similar to the evaluation that was performed as part of Tetra Tech’s certification of the Chino Canyon Levee (immediately upstream of the Whitewater River Levee) that was approved by FEMA. This previous evaluation demonstrated that the alluvial soils underlying the levee were predominantly granular and semi-pervious and were not susceptible to long-term consolidation effects under existing levee embankment loading.

If freeboard requirements require raising of portions of the Whitewater River Levee, Tetra Tech will evaluate settlement effects from construction of additional embankment or floodwalls. The estimated future settlement from this evaluation would be incorporated into overbuild of the top of levee or floodwall elevation.

Embankment and Foundation Stability – Per the requirements of 44 CFR 65.10 (b) 4, the evaluation of the levee and foundation stability must consider the effects of flood loading. The regulation allows one of two alternatives to perform this evaluation. One alternative is to perform Case IV analysis per the U.S. Army Corps of Engineers Manual EM 1110-2-1913 which prescribes steady state seepage conditions. The other alternative is to evaluate expected seepage during loading conditions associated with the base flood and to demonstrate that seepage into or through the levee foundation and embankment will not jeopardize embankment or foundation stability. The regulation further states that the duration of flooding is a factor that can be considered in the analysis. This implies that for some conditions, a time dependent (or transient) seepage analysis may be appropriate.



It is Tetra Tech's experience in evaluating existing levees in southern California that many levees were designed to withstand only short term flood conditions. If steady state seepage conditions are assumed, then the effects of high pore pressures within the embankment or foundation and high hydraulic exit gradients near the toe of the landside slope are often problematic.

Based on the FEMA guidelines, the Tetra Tech geotechnical team has successfully utilized transient seepage analysis to evaluate seepage through and under levee embankments in cases where flood loading is of short duration and the levee does not meet stability requirements for steady state conditions. Such a procedure may be required for the Whitewater River Levee and the Tetra Tech team has an established track-record in FEMA approval of transient seepage analysis. The key to our successful use and approval of transient seepage evaluations include the following factors:

- Use of the SEEP/W program, a finite element software which can perform transient seepage analysis and model both saturated and unsaturated seepage.
- Well documented evaluation of pertinent soil properties, including saturated hydraulic conductivity and water volume/capillary soil pressure characteristics.
- Clear definition of seepage model geometry and boundary conditions including flood level/duration plots.
- Appropriately conservative assumptions for initial modeling conditions including pre-flood soil water contents and low flow levels.

The results of the seepage modeling (including pore pressure distributions) are directly input to the software SLOPE/W in order to perform all necessary stability analyses. Per FEMA requirements, stability analyses will include the following cases to match the current MT-2 form:

Case	Procedure
After Construction	Not typically required for existing levee more than 10 years old but will be included for FEMA review purposes.
Rapid Drawdown	Either assumed instantaneous drawdown or partially drained depending on flood hydrograph and soil conditions.
Critical Flood Stage	No longer required per USACE EM 1110-2-1913 but will be included for FEMA review purposes
Steady State at Flood Stage	Where appropriate, modified to a transient analysis during flood stage.
Earthquake	Typically utilizing a K_h of 0.15.

Task 2 – Deliverables: Following completion of analysis, a geotechnical summary report will be prepared which will provide conclusions with regard to FEMA criteria for levee settlement and embankment and foundation stability. If any portion of the levee is deficient regarding any of the FEMA criteria, specific recommendations for repair, modification or reconstruction will be presented.



Task 3 – Structural Evaluation

Tetra Tech will perform a structural evaluation of the concrete slope paving, CMU retaining wall at the Dina Shore Bridge abutment, drainage penetrations, headwalls and closure devices (i.e. flap gates). The structural evaluation will be performed by reviewing available information, which will include a review of as-builts, Period or Annual Inspection Reports, and the site visit to visually assess the structural elements. This effort will also include the evaluation of the structural integrity as appropriate. No material testing will be performed as part of this task. Tetra Tech will determine at a feasibility-level, the type and extent of structural improvements required to support certification.

Task 3 – Deliverables: A Draft structural evaluation summary table will be submitted to the District in electronic (Word, PDF, etc.) format for review and comment. The final structural evaluation summary table will be part of the Task 4 deliverable.

Task 4 – Geotechnical and Structural Deficiencies Report

Tetra Tech will prepare a Geotechnical and Structural Deficiencies Report based on the results of Tasks 1 through 3. This report will document and describe the deficiencies identified along the levee system along with recommendations for mitigation.

Task 4 – Deliverables: A Draft Geotechnical and Structural Deficiencies Report will be submitted to the District in electronic (Word, PDF, etc.) format for review and comment. Upon addressing the review comments a Final Geotechnical and Structural Deficiencies Report will be submitted to the District in electronic (Word, PDF, etc.) and hard copy (3 copies) formats.

Task 5 – Alternatives Analysis for Levee Improvements

According to the RFP some parts of the Whitewater River Levee near Ramon Road do not have adequate freeboard or may be overtopped during a 100-year flood. In additions there are several levee tie-in sections at road crossings and tie-backs at a drainage outlet. Tetra Tech will determine the extent of the levee improvements required based on Task 4 and the results of the hydraulic analyses.

The upstream end of the levee will require tying into natural high ground or a FEMA accredited levee to comply with 44 CFR 65.10. Chino Canyon Creek Levee is an accredited levee located just across Indian Canyon Drive from the upstream end of the Whitewater River Levee. Since these two levees do not tie into natural high ground, but rather into the engineered road embankment of Indian Canyon Drive, the Whitewater River Levee will require a strip of Indian Canyon Drive, in the line of continuity, to become part of the levee system. This will require evaluation of the roadway embankment and section for stability, settlement, seepage, and erosion protection.

Similarly the line of Whitewater River Levee continuity will be evaluated at; the tie-backs for the drainage outlet near the end of Desert Breeze Way, the tie-ins at the Gene Autry Trail crossing, and the tie-ins at the Vista Chino crossing. The tie-backs for the drainage outlet will be evaluated to determine if



they tie into natural high ground or if a drainage closure structure element needs to be added to the levee system. The Whitewater River Levee ties into the engineered road embankment at Gene Autry Trail and Vista Chino, therefore a strip of these two roads will need to become part of the levee system to provide the line of continuity. The crossing locations will require evaluation of the roadway embankment and section for stability, settlement, seepage, and erosion protection.

Tetra Tech will evaluate solutions for the inadequate freeboard near Ramon Road. Potential solutions would include raising the levee. Raising the levee just upstream of Ramon Road has a few challenges as there is a drainage penetration and a water utility facility that encroach very close to the levee prism. The additional levee height could be implemented with a reinforced concrete or sheet pile floodwall/retaining wall combination with aesthetic treatment as appropriate.

Tetra Tech will perform an alternatives analysis to define rehabilitation solutions of identified major deficiencies of the Whitewater River Levee. These may include; geotechnical and structural deficiencies, several levee tie-in locations, and insufficient freeboard height near Ramon Road.

Tetra Tech will develop preliminary temporary construction easements that will be required to implement the rehabilitation solutions and coordinate with the District and/or City in determining Rights-of Way needs. In addition Tetra Tech will coordinate with the District, City and utility purveyors to determine, to the extent possible, any utility conflicts or relocations (potholing utilities is not included in this scope of work).

Tetra Tech will coordinate with the District to develop a list of potential permits that will be required to implement the rehabilitation solutions. The District will prepare any required environmental studies and documents, and will prepare and submit all the permits.

Tetra Tech will prepare feasibility level plans and preliminary construction cost estimates of the rehabilitation solutions including any cost anticipated from the environmental studies, as well as any annual operation and maintenance costs.

Tetra Tech will prepare a pre-design report to document the work performed in this task. If any of the alternatives would require changes to the existing operation and maintenance of the levee, the documentation will include a description of those requirements.

Task 5 – Deliverables: A Draft Pre-Design Report will be submitted to the District in electronic (Word, PDF, etc.) format for review and comment. Upon addressing the review comments a Final Pre-Design Report will be submitted to the District in electronic (Word, PDF, etc.) and hard copy (3 copies) formats.

Task 6 – Levee Certification Report

After successful completion of all necessary levee repairs and modifications, Tetra Tech will prepare a Levee Certification Report (LCR) to document and describe the basis for the certification determination of the levee system. The LCR will contain full documentation of data, information, as-builts, assumptions,



and explanation sufficiently clear so that an individual not familiar with the project will be able to review the LCR and understand how the levee certification was determined. The LCR will include a revised Geotechnical Report that will substantiate that the levee now meets FEMA criteria. The revised Geotechnical Report will present the findings of the original report prepared in Task 2, updated to reflect all levee repairs and modifications. Tetra Tech will complete all necessary forms and documents required by FEMA including MT-2 Form 3, *Riverine Structures Form*. Forms will be included as part of the LCR.

It is our understanding that the interior drainage analysis will be performed by a separate consultant. We are experienced in the specific requirements FEMA has for interior drainage (including joint probability analysis as well as closure requirements, including conditions where containment within the system is acceptable in place of a closure). As part of our work under this task, we would provide a cursory review of the interior drainage analysis to ensure that it addresses these specific FEMA requirements. Consistent with the requirements of Procedural Memorandum 63 (PM 63), the LCR would summarize these requirements and refer to the Appendix containing the Interior Drainage Analysis. No interior drainage analysis is anticipated as part of this task.

It is our understanding that the District is in the process of updating their Operations and Maintenance Plan and Manual (OMPM). As part of the LCR we would provide a cursory review of the OMPM to ensure that the specific requirements of PM 63 are met and this summary would be provided with a reference to the OMPM as an appendix. No updates of the OMPM, beyond what is described in Task 5, are anticipated as part of this task.

Task 6 – Deliverables: A Draft Levee Certification Report will be submitted to the District in electronic (Word, PDF, etc.) format for review and comment. Upon addressing the review comments a Final Levee Certification Report will be submitted to the District in electronic (Word, PDF, etc.) and hard copy (3 copies) formats.

Draft Outline of Final Levee Certification Report

1. SYSTEM DESCRIPTION
 - 1.1 Levee Location and Main Features
 - 1.2 Local Ownership
2. PREVIOUS CERTIFICATION INFORMATION / FIRM OR DFIRM
3. LEVEE CERTIFICATION DETERMINATION LETTER
4. OVERALL PERFORMANCE HISTORY
5. ENGINEERING STUDIES, INVESTIGATIONS AND ANALYSES
 - 5.1 Site Visit Summary
 - 5.2 Hydrology Evaluation
 - 5.3 Hydraulic Evaluation
 - 5.4 Interior Drainage
 - 5.5 Structural Evaluation
 - 5.6 Geotechnical Evaluation
6. SYSTEM EVALUATION



6.1 Residual Risk

7. REFERENCES

8. APPENDICES

APPENDIX A Site Visit Report

APPENDIX B Hydrology and Hydraulics Report

APPENDIX C Structural Report

APPENDIX D Geotechnical Report

APPENDIX E FEMA MT-2 Forms

APPENDIX F Operations and Maintenance Plan and Manual



Task 7 – Project Management

Tetra Tech will prepare a quality control plan to identify our development team, independent review team, and required disciplines for reviews. Tetra Tech will coordinate and manage milestones, the schedule, project roles and responsibilities, the resource plan, and the document control process of the project team.

Tetra Tech will maintain appropriate project-level coordination with the District and with the Federal Emergency Management Agency (FEMA) to ensure successful partnership. We will focus on maintaining the coordination that is needed to progress this project along the most desirable and feasible path while ensuring that the end goals are reached. Of particular importance is persistent coordination with FEMA. Tetra Tech will ensure that each task and deliverable is based on FEMA guidance and practices so that coordination will be smooth. This effort will also include Tetra Tech's participation in up to four (4) FEMA Consultations to be held the District's office.

Tetra Tech will conduct the following meetings during the project:

- Project Kick-off meeting to be held at the Agency's office to go over the scope of services, schedule, boring plan and project objectives.
- Monthly progress meetings via conference calls or live web meetings will be held for months not covered by specific Progress Meetings shown in this section.
- Technical Studies Progress Meeting #1 to be held at the District's office to go over the project status of the data collection, site visit, and levee condition assessment.
- Technical Studies Progress Meeting #2 to be held at the District's office to go over the project status of the geotechnical and structural deficiencies.
- Technical Studies Progress Meeting #3 to be held at the District's office to go over the project status of the alternatives analysis for levee improvements.
- Technical Studies Progress Meeting #4 to be held at the District's office to go over the project status of the levee certification report.

Task 7 – Deliverables: Electronic copies of schedule, boring plan, and minutes for all meetings between Tetra Tech and District, as well as those between Tetra Tech and others (i.e. FEMA, stakeholders).

Tetra Tech Fee Proposal (Revised)
Whitewater River Levee West Bank Levee Geotechnical Analysis, Recommendations and Levee Certification
Project No. 6-6-00250

Hourly Rates:		\$284.50	\$235.00	\$220.00	\$175.50	\$146.50	\$111.50	\$96.50	\$125.00	June 20, 2014		
TE	Scoped Tasks	Program Director QA/QC	Sr. Project Manager	Sr. Geotech Manager	Project Engineer	Staff Engineer	CADD/GIS	Word Processor	Geologist	Sub-Contractor	ODC	Total Fee
	1.a Data Collection											
	1.b Field Visit and Inspection											
	1.c Field Inspection Summary Table											
	2.a Review of Existing Data											
	2.b Field Reconnaissance											
	2.c Exploratory Borings											
	2.d Field Permeability Tests											
	2.e Laboratory Testing											
	2.f Aerial Photography Review											
	2.g Review and Collation of Field Data											
	2.h Preparation of Logs and Maps											
	2.i Selection of Critical Cross Sections											
	2.j Settlement Evaluation											
	2.k Steady State & Transient Analysis (8 X sections)											
	2.l Stability Analysis (8 x sections)											
	2.m Seismic Analysis / Deformation											
	2.n Independent Technical Review											
	2.o Draft Geotechnical Report											
	2.p Responses to Comments											
	2.q Final Geotechnical Report											
	3.a Structural Evaluation											
	3.b Review of Existing Data											
	3.c Structural Evaluation											
	3.d Draft Structural Evaluation Summary Table											
	4.a Review of Geotechnical and Structural Deficiencies											
	4.b Draft Deficiencies Report											
	4.c Responses to Comments											
	4.d Final Deficiencies Report											
	5.a Review of Hydraulic, Survey, Deficiencies, and Field Data											
	5.b Determine Locations Requiring Improvements											
	5.c Develop Alternatives											
	5.d ROW, TCE, Utility Determinations/Coordination											
	5.e Develop List of Permits/Environmental Studies Coordination											
	5.f Prepare Feasibility-Level Plans and Costs											
	5.g Draft Pre-Design Report											
	5.h Responses to Comments											
	5.i Final Pre-Design Report											
	6.a Updated Geotechnical Report											
	6.b Obtain and Review Final H&H Report and O&M Manual											
	6.c Prepare FEMA MI-2 Form 3, Section E											
	6.d Independent Technical Review											
	6.e Draft Levee Certification Report											
	6.f Responses to Comments											
	6.g Final Levee Certification Report											
	7.a FEMA Coordination											
	7.b Project Kick-off Meeting											
	7.c Monthly Progress Meetings											
	7.d Technical Progress Meeting #1											
	7.e Technical Progress Meeting #2											
	7.f Technical Progress Meeting #3											
	7.g Technical Progress Meeting #4											
	Contributory Contingency at 10%											
TOTAL FEES											\$3,703,800	