



BOARD OF SUPERVISORS AGENDA ITEM REPORT
CONTRACTS / AWARDS / GRANTS

☐ Award ☒ Contract ☐ Grant

Requested Board Meeting Date: 10/01/2019

* = Mandatory, information must be provided

or Procurement Director Award ☐

***Contractor/Vendor Name/Grantor (DBA):**

CMG Drainage Engineering, Inc.

***Project Title/Description:**

Santa Cruz River Management Plan: Grant Road to Trico Road

***Purpose:**

Amendment: Contract No. CT-FC-18-215, Amendment No. One (1). This amendment extends the term of the contract to 06/30/21, modifies the scope of work to include Phase 2, and increases the contract amount for a cumulative not-to-exceed amount of \$1,303,804.64. Administering Department: Regional Flood Control District.

***Procurement Method:**

Pursuant to Solicitation for Qualifications No. 272080 on 02/08/18 the Board of Directors awarded a contract for this project in the amount of \$552,568.00 for a contract term of 02/06/18 to 12/18/20.

Attachments: Amendment No. One (1)

***Program Goals/Predicted Outcomes:**

The project will provide more accurate floodplain limits and flood infrastructure capacity, and generate new floodplain maps which will be used to better determine flood risk to people and property, and identify where work needs to be done to mitigate those risks.

***Public Benefit:**

The plan will identify flood hazard areas as a basis for capital improvements along the Santa Cruz River that will protect people and property from flooding through solutions that will benefit the community in multiple ways including recreation, habitat enhancement and improved effluent recharge to the aquifer.

***Metrics Available to Measure Performance:**

The performance will be measured using the consultant evaluation process as outlined in BOS Policy D29.1(E)(II).

***Retroactive:**

No

To: CoB- 9.12.19
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(1)

Document Type: _____ Department Code: _____ Contract Number (i.e., 15-123): _____
Effective Date: _____ Termination Date: _____ Prior Contract Number (Synergen/CMS): _____
☐ Expense Amount: \$* _____ ☐ Revenue Amount: \$ _____

***Funding Source(s) required:**

Funding from General Fund? ☐ Yes ☐ No If Yes \$ _____ % _____

Contract is fully or partially funded with Federal Funds? ☐ Yes ☐ No

If Yes, is the Contract to a vendor or subrecipient? _____

Were insurance or indemnity clauses modified? ☐ Yes ☐ No

If Yes, attach Risk's approval.

Vendor is using a Social Security Number? ☐ Yes ☐ No

If Yes, attach the required form per Administrative Procedure 22-73.

Amendment / Revised Award Information

Document Type: CT Department Code: FC Contract Number (i.e., 15-123): 18-215

Amendment No.: One (1) AMS Version No.: Twelve (12)

Effective Date: 10/01/19 New Termination Date: 06/30/21

Prior Contract No. (Synergen/CMS): _____

☒ Expense or ☐ Revenue ☒ Increase ☐ Decrease Amount This Amendment: \$ 751,236.64

Is there revenue included? ☐ Yes ☒ No If Yes \$ _____

***Funding Source(s) required:** Flood Control Tax Levy

Funding from General Fund? ☐ Yes ☒ No If Yes \$ _____ % _____

Grant/Amendment Information (for grants acceptance and awards) ☐ Award ☐ Amendment

Document Type: _____ Department Code: _____ Grant Number (i.e., 15-123): _____

Effective Date: _____ Termination Date: _____ Amendment Number: _____

☐ Match Amount: \$ _____ ☐ Revenue Amount: \$ _____

***All Funding Source(s) required:**

*Match funding from General Fund? ☐ Yes ☐ No If Yes \$ _____ % _____

*Match funding from other sources? ☐ Yes ☐ No If Yes \$ _____ % _____

*Funding Source: _____

***If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)?**

Contact: William Brooks, Procurement Officer 8/28/19 Refuse 9/3/19

Department: Procurement 9/4/19 Telephone: 520-724-3245

Department Director Signature/Date: [Signature] 9/9/19

Deputy County Administrator Signature/Date: [Signature] 9/13/19

County Administrator Signature/Date: [Signature] 9/13/19
(Required for Board Agenda/Addendum Items)

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

PROJECT: Santa Cruz River Management Plan: Grant Road to Trico Road

CONSULTANT: CMG Drainage Engineering, Inc.
3555 N. Mountain Ave
Tucson, Arizona 85719

CONTRACT NO.: CT-FC-18-215

AMENDMENT NO.: One (1)

FUNDING: Flood Control Tax Levy

CONTRACT TERM: 02/06/18 - 12/18/20	ORIGINAL CONTRACT AMOUNT:	\$	552,568.00
TERMINATION PRIOR AMENDMENT: N/A	PRIOR AMENDMENT(S):	\$	-
TERMINATION THIS AMENDMENT: 06/30/21	AMOUNT THIS AMENDMENT:	\$	751,236.64
	REVISED CONTRACT AMOUNT:	\$	1,303,804.64

CONTRACT AMENDMENT

WHEREAS, DISTRICT and CONSULTANT have entered into the Contract referenced above; and

WHEREAS, the project was anticipated to be conducted in multiple phases; and

WHEREAS, DISTRICT and CONSULTANT have mutually agreed upon the scope of services for Phase 2; and

WHEREAS, CONSULTANT has agreed to provide these services at a cost acceptable to DISTRICT; and

WHEREAS, DISTRICT and CONSULTANT have agreed to extend the term of the Contract and increase the Contract amount to provide for these services.

NOW, THEREFORE, it is agreed as follows:

CHANGE: ARTICLE 1 – TERM AND EXTENSION/RENEWAL/CHANGES, first paragraph as follows:

FROM: "This Contract, as approved by the Board of Directors, commences on February 6, 2018 and terminates on December 18, 2020, unless sooner terminated or further extended pursuant to the provisions of this Contract."

TO: "This Contract, as approved by the Board of Directors, commences on February 6, 2018 and terminates on **June 30, 2021**, unless sooner terminated or further extended pursuant to the provisions of this Contract."

CHANGE: ARTICLE 2 – SCOPE OF SERVICES, first paragraph as follows:

FROM: "CONSULTANT agrees to provide Consultant Professional Services for the DISTRICT as described in EXHIBIT "A" - SCOPE OF SERVICES (8 pages), attachments to this Contract, and to complete such services within the term and value of this Contract as it may be modified in accordance with ARTICLE 5 and ARTICLE 6."

TO: "CONSULTANT agrees to provide Consultant Professional Services for the DISTRICT as described in EXHIBIT "A" - SCOPE OF SERVICES (8 pages) **and EXHIBIT "A" – SCOPE OF SERVICES, Attachment 1 (11 Pages)**, attachments to this Contract, and to complete such services within the term and value of this Contract as it may be modified in accordance with ARTICLE 5 and ARTICLE 6."

CHANGE: ARTICLE 4 – COMPENSATION AND PAYMENT, third paragraph as follows:

FROM: "CONSULTANT'S total CPFF will be allocated among the major tasks contemplated by this Contract in such manner that each major deliverable will have associated with it a not-to-exceed cost, plus a fixed fee amount, incorporated herein as EXHIBIT "B" – COMPENSATION SCHEDULE (20 pages)."

TO: "CONSULTANT'S total CPFF will be allocated among the major tasks contemplated by this Contract in such manner that each major deliverable will have associated with it a not-to-exceed cost, plus a fixed fee amount, incorporated herein as EXHIBIT "B" – COMPENSATION SCHEDULE (20 pages) **and EXHIBIT "B" – COMPENSATION SCHEDULE, Attachment 1 (10 Pages).**"

This Amendment shall be effective on October 1, 2019.

All other provisions of the Contract, not specifically changed by this Amendment, shall remain in effect and be binding upon the Parties.

IN WITNESS THEREOF, the Parties have affixed their signatures to this Amendment on the dates written below.

APPROVED:

Chairman, Board of Directors

Date

CONSULTANT:

Serald L. Curless
Signature

GERALD L. CURLESS, VICE PRESIDENT
Name and Title (Please Print)

9/13/2019
Date

ATTEST:

Clerk of the Board

APPROVED AS TO FORM:

Stacey Roseberry
Deputy County Attorney
STACEY ROSEBERRY

Name (Please Print)

9/12/19
Date

EXHIBIT "A" - SCOPE OF SERVICES, Attachment 1 (11 Pages)

I. General Description

A. Background:

The Santa Cruz River in northeastern Pima County is Arizona's longest effluent-dependent river. The condition of the Santa Cruz River is heavily influenced by effluent management practices and water resource concerns. The Pima County Regional Wastewater and Reclamation Department has completed the \$660 million Regional Optimization Master Plan (ROMP), which has upgraded the two-major regional wastewater treatment plants that discharge to the river. The significantly improved water quality of the effluent has led to a commensurate increased interest in the beneficial use of that water and/or the desire for increased water recharge credits. The Bureau of Reclamation, Cortaro Marana Irrigation District, Marana Water, Flowing Wells Irrigation District, Tucson Water, Metro Water, Oro Valley Water and Pima County have interest in the use of this water for beneficial uses such as recharge, turf irrigation, and riparian enhancements. All of these have the potential to conflict with the channels primary purpose, flood conveyance and flood risk reduction.

B. Project Purpose

The purpose of this project is to develop a management strategy to balance flood risk management, drainage infrastructure protection, water recharge, recreation and education opportunities and riparian habitat preservation for the Santa Cruz River from Grant Road to Trico Road.

C. Project Description

The lower portion of the Santa Cruz River in Pima County constitutes the District's principal wetland habitat. Continuous effluent discharge from the Regional Wastewater Reclamation facilities creates improved wetland ecosystems and floodplain aesthetics along the lower Santa Cruz River. This project, with the assistance of experts and stakeholders, will provide strategic planning and planning-level alternatives to help balance environmental, water resource, recreation, education, and flood hazard reduction needs, desires, and concerns.

CMG Drainage Engineering has completed *Phase 1* which updates the flood hazard areas and identifies drainage conveyance and maintenance deficiencies. *Phase 2* will develop a management strategy by: identifying flood control alternatives with multi-objective criteria; reaching out to stakeholders and the public; preparing concept level plans and cost estimates for selected alternatives; and preparing an implementation plan.

This Scope of Services will outline tasks included in Phase 2 in detail.

D. Location

The approximate limits of the Santa Cruz River Management Plan (Grant to Trico) are shown on Attachment 1. The lateral extent along this alignment is limited to locations where RFCD has operational control (ownership or maintenance responsibilities).

E. Project Elements

PHASE 2

Recently Available Information

The following information are anticipated to be available at the initiation of Phase 2 and will serve as collaborative input for establishing priorities during the alternatives and implementation exercises:

- Sonoran Institute Collaborative Opportunities Assessment.
- Concepts for Marana Drainage Master Plan.
- Lower Santa Cruz River: Identifying the Recreational and Economic Benefits of Physical Access and Trails along the Santa Cruz River.
- El Rio Habitat Restoration Project
- Santa Cruz River Sediment Transport Study - University of Arizona (2016)
- Evaluating the Effect of Channel Modifications on changes in Recharge: Santa Cruz River Cortaro Road to Avra Valley Road - Karl Pereira MS Study (2019)
- Pima County Floodplain Management Plan – expected fall of 2019
- Living River Data Sets – in preparation as a google doc, expected fall of 2019
- City of Tucson Parks Bond sites along the Santa Cruz

Previous Concepts and Evaluation

In addition, the evaluation will consider previous concepts introduced for this part of the river including, but not limited to:

- The Tres Rios Del Norte Feasibility Study, especially the F5 Design recommended alternative (March, 2010).
- The Corazon Del Tres Rios Del Norte – Strategic Implementation Plan (2011)
- Preliminary Alternatives Analysis Continental Ranch Low Flow Channel Stabilization (July, 2008)
- Recent Bed Changes in the Santa Cruz River Reach from Ina Rd to the Continental Ranch (1999)
- Santa Cruz River Management Plan – Simons Li and Associates (1986)
- Historical Conditions of the Effluent - Dependent Santa Cruz River (2013)

Available Regional Plans

These will include, but not be limited to, the Tucson General Plan, Pima County Comprehensive Plan and the Town of Marana's General Plan.

Available Studies from Phase 1

Three Phase-I deliverables are also available to serve as supporting documents for identifying constraints and deficiencies that will guide the alternatives selection process: *Existing Conditions Report*, the *Infrastructure Assessment & Maintenance Evaluation Report (IAMER)* and *Technical Data Notebook*. The elements below will complete the Management Plan Development process to arrive at a complete and collaborative Management Plan Document to be presented for adoption by the municipalities along the river:

E6: Alternatives Analysis and Recommended Solutions: Both structural and non-structural alternatives will be evaluated.

E7: Stakeholder Engagement: Stakeholders will weigh in on the recommended alternatives and implementation plan.

E8: Public Engagement.

E9: Implementation Plan.

Schedule

The consultant shall complete Phase 2 elements of the study within 670 calendar days from the issue of Notice-to-Proceed (NTP) date. Elements shall be completed during this timeframe according to the following milestones for Final Deliverables:

Stakeholder Process

Stakeholder Working Group Session – Evaluation Criteria Discussion (3 reaches)	October, 2019
Stakeholder Working Group Session – Suite of Alternatives) (3 reaches)	January, 2020
Stakeholder Working Group Session – Refine Alternatives) (3 reaches)	March, 2020
Stakeholder Meeting – Possible Alternatives (Full Stakeholder List)	May, 2020
Stakeholder Meeting – Recommended Alternatives (Full Stakeholder List)	August, 2020

Public Meeting Process

Public Meeting #1 – project introduction, known issues, process (3 reaches)	December, 2019
Public Meeting #2 – Possible Alternatives (3 reaches)	May, 2020
Public Meeting #3 – Recommended Alternatives (3 reaches)	January, 2021

Reports

Recommended Alternatives Report	August, 2020
Implementation Plan	December, 2020
Santa Cruz River Management Plan (Summary Report)	February, 2021
Executive Summary (for presentation to Board and Municipal Councils)	March, 2021
Public Engagement Summary (By Sonoran Institute)	April, 2021
Stakeholder Engagement Report	April, 2021
Provision of all Documentation on Hard Drive	June, 2021

LOMR (Optional)

Modifying Baseline models for Maintenance Activities	To Be Determined
TDN and LOMR application	To Be Determined
FEMA approval of LOMR	To Be Determined

F. General Assumptions

- The level of effort for each task is limited to the amount of labor and expenses identified in the Project Budget spreadsheet. Costs are itemized to aid in project tracking purposes only. The budget may be transferred between tasks, provided the total contracted amount is not exceeded. Additional services beyond these limits will be considered Extra Work.
- The Phase 2 project duration is anticipated to be eighteen (18) months; however, FEMA approval will take longer. The Consultant is responsible for meeting deadlines for their and subconsultants' tasks only.
- Unless specified within individual tasks, deliverables will be electronic PDF format submitted to the District and native file formats.
- All direction received by Consultant regarding the accommodation of stakeholders must come from the District Project Manager in writing.
- Subconsultants' assumptions and exclusions provided in their detailed scope of services are hereby incorporated into the Consultants scope of services.

II. Tasks (Phase 2)

The following Tasks are the components of Phase 2 in accordance with Attachment 2.

Task II-1 - Stakeholder Involvement

- a) The District will select participants for Stakeholder Workgroups for focused outreach to stakeholders in each of the three management reaches, which are as follows:
 - 1. Grant Rd to Ina Rd
 - 2. Ina Rd to Avra Valley Rd
 - 3. Avra Valley Rd to Trico Rd
- b) The District shall coordinate, and the Consultant shall attend twelve (12) Stakeholder Workgroup meetings during the course of the Study, planned in conjunction with the Consultant's investigations, at the following milestones:
 - 1. At Problem Area/Opportunity Identification/Potential Evaluation Criteria Stage (Each of 3 Reaches) – Stakeholder Work Group
 - 2. At 'Seed List' of Alternatives and Alternatives Scoring (Each of 3 Reaches) Stakeholder Work Group.
 - 3. At Alternatives Refinement
 - 4. At Completion of Alternative Analysis and Project Recommendation (approximately 15 months)

It is assumed that District PM will send the meeting invitations, secure the meeting location, and give the introduction to the meeting. Consultant will prepare and present materials and exhibits as necessary for the meeting.

- c) Stakeholder meetings to present the findings of the Stakeholder Workgroups and project team will include, but not be limited to invitation of the following organizations:

Pima County Regional Wastewater Reclamation Dept
Pima County Office of Conservation and Sustainability
Pima County Natural Resources Parks and Recreation
Pima County Planning
City of Tucson Department of Transportation
City of Tucson Parks
Tucson Water
Town of Marana
Marana Water
Oro Valley Water
Metro Water
Bureau of Reclamation
Army Corps of Engineers
University of Arizona
Kinder Morgan
UPRR
School District Transportation Depts.

Pima Association of Governments
Community Water Coalition
WMG
Sonoran Institute
Tucson Audubon
SAWUA
Water Casa
Metro Pima Alliance
SAHBA
Freeport McMoran (requested to participate)
BKW Farms
CMID
TEP
Western Power Administration
ADOT
Private Sector Engineers representing
Landowners

Meetings with the collected stakeholders are anticipated to occur at the Possible Alternatives, and Implementation Plan Phases

- d) The Consultant shall document and provide minutes and sign-in sheets to the District for all Stakeholder meetings.

- e) The Consultant shall provide monthly stakeholder coordination throughout the project at a mutually agreeable time between the District PM and the Consultant PM. This time is designed for specifically identified/targeted stakeholders that the project team needs more interaction with. This effort is limited to approximately 6 hours of the Consultant Project Manager per month to account for attendance, preparation of materials for meeting, and meeting minutes. Effort beyond 6 hours per month can be charged to the project contingency. Subconsultants attendance is not included in this effort.
- f) The Consultant shall arrange, attend, provide materials, and document up to 12 undefined informational meetings as necessary to gather information or to discuss alternatives. These will be coordinated with the District and assumes that the meetings can take place in a District conference room. Informational meetings could be with public agencies, associations, developers, neighborhood associations or individual landowners. Assumes meetings no more than one (1) hour in length.

Task II-2 – Alternatives Analysis and Recommendations

- a) Identify Problem Areas and Opportunities: The Consultant shall consider findings identified in Phase I with respect to deficiencies and needs and use other parallel studies (such as the *Recently Available Information* identified in E) and the *Previous Evaluations and Concepts* identified in E. as overlays to find intersection with flood control needs and opportunities for multi-objective projects. These problem areas and opportunities should be presented to the Stakeholders and Public for feedback toward prioritization.
- b) Consultant shall prepare an Existing Constraints Map from data collected in Phase 1 and including, but not limited to:
 - 1. Areas suitable for riparian restoration for the purpose of preserving those areas.
 - 2. Areas suitable for managed and constructed recharge for the purpose of preserving those areas.
 - 3. Areas of critical habitat for endangered or threatened species and wildlife connectivity.
 - 4. Areas of already documented cultural resources significance within the un-protected reaches.
 - 5. Areas of potential major utility conflict
- c) The Consultant shall generate a comprehensive list of potential alternatives (up to 40 in quantity) for future capital improvement that consider the following objectives:
 - 1. Flood safety
 - 2. Preservation/continued maintenance of infrastructure
 - 3. Desirable riparian habitat
 - 4. Recreational opportunities
 - 5. River access
 - 6. Regional Transportation Planned routes
 - 7. Water harvesting and restoring riparian habitat at tributaries
 - 8. Trash/Debris harvesting

Alternatives should not be vetted/scored with this task other than ensuring they meet one of the above objectives. Deliverable is a List with a map of the alternative locations. No schematics are included at this stage.

- d) The Consultant shall prepare an Alternative Scoring Criteria based on a defensible/widely-accepted ranking process such as Envision Rating System or the Corps' Multi-Criteria Decision Analysis. District PM will finalize the alternative criteria prior to moving into future tasks.
- e) The Consultant shall develop a step by step process for indexing changes in vegetation growth as it relates to Manning's roughness. This process should detail the methods of how to compare first return LiDAR from year to year and develop an indexing system that will alert floodplain managers when

vegetation growth has triggered a change to Manning's "n" value. Indexed values will be established for each reach of the River.

- f) The Consultant shall score and rank alternatives using District approved scoring criteria from Task D. The result of the ranking will serve to establish the recommended maximum of sixteen (16) structural alternatives and up to four (4) non-structural alternatives to be studied further in the future Santa Cruz River Management Plan.
- g) The Consultant shall update modify baseline hydraulic models from Phase I to confirm proposed alternatives are feasible when those alternatives significantly alter the Santa Cruz Corridor. This task shall be limited to the 5% and 1% Annual Exceedance Probability (AEP) storms only. This task effort will be limited to the budget in the fee estimate. Effort beyond the established budget may be funded by contingency or through a change order.
- h) The Consultant shall prepare detailed assessment of the sediment transport capacity of the effluent flow channel in the Ina to Avra Valley reach evaluating the potential of continued degradation of the channel to the toe, and as a basis for developing alternatives to prevent further degradation in this reach. Tasks include:
 - 1. Conducting a site visit to examine effluent channel conditions where significant changes have been measured.
 - 2. Reviewing and evaluate previous study information related to sediment transport along the study reach.
 - 3. Defining the effluent channel geometric characteristics such as slope and meander patterns.
 - 4. Reviewing available sediment data.
 - 5. Conducting a historical assessment to determine past channel changes related to effluent flows and other possible channel conditions that can contribute to measured changes.
 - 6. Evaluating the relationship between effluent flows and storm water flows relative to channel entrenchment processes.
 - 7. Developing alternatives and recommendations for channel stabilization measures for controlling future degradation and to align the effluent channel away from bank protection.
 - 8. Prepare text and exhibits describing the methodology and results of the sediment transport assessment to be included in the Alternatives Analysis report.

In addition, consultant will locate and track advancement of headcut on the Santa Cruz River in Pinal County. Advancement rate will be developed based on movement on historical aerials

- i) The Consultant shall meet with the District to approve the sixteen (16) structural and up to four (4) non-structural alternatives to be progressed conceptually to a 15% design. The focus of this feasibility level evaluation is to determine if suitable project alternatives exists to achieve the objectives as listed in Task C. The results of the analysis, including preliminary designs to 15% plans and conceptual cost estimates, shall be summarized in an Alternatives Selection Report. It is assumed that each structural alternative may require the landscape architecture discipline for a maximum of 200 hours of labor for this task. If the landscape architecture effort requires more than the allotted 200 hours, it can be provided under Task III-3 or Task III-4 at the District's discretion.
- j) The Consultant team shall have a contingency budget available for the District PM to seek expertise in the following categories: Biological Resources, Ecology, Groundwater, Public Relations, Water Supply/Distribution, Cultural Resources, Geotechnical, Landscape Architecture, Riparian Habitat, and other unforeseen items. This budget item will only be used at the discretion of the District PM.

Task II-3 – Implementation Plan

The consultant shall prepare an Implementation Plan for implementing the recommended alternatives, which will include phasing, costs, funding sources and partnerships. This implementation plan will largely be in tabular report format with maps, conceptual drawings, and up to 10 artistic renderings from either plan or elevation perspective.

Task II-4 – Baseline Hydraulic Model Updates

This task includes updating the hydraulic models developed in Phase 1 to reflect ongoing improvements or channel maintenance with a new topo collection flight conducted in 2021. This task is not intended for modeling alternatives. For alternative modeling see Task II-2(h). This effort will be limited to the budget in the fee estimate and a one-time update. Additional updates reflecting maintenance after the flight will be addressed as additional services.

Task II-5 – Letter of Map Revision (Optional)

If deemed necessary by Pima County Regional Flood Control District, the City of Tucson, or the Town of Marana, this task includes filing a Letter of Map Change application with FEMA to reflect floodplain changes due to better information, floodplain changes due to ongoing improvements or maintenance, or both. This does not include changes due to alternatives developed in Task II-2.

- a) The Consultant will prepare a FEMA LOMR submittal per FEMA's *Standards for Flood Risk Analysis and Mapping* (November 30, 2015).
- b) The Consultant shall prepare an existing conditions hydrology and hydraulics report in accordance with ADWR State Standard 1-12 Technical Data Notebook (TDN) or modify the TDN prepared in Phase 1.
- c) The LOMR includes remapping the FEMA Floodway and the 1% & 0.2% annual chance floods and extending the Tortolita Fan effective model to the west. Since the modeling from Task 2 may be in the unsteady 2D environment, the floodway encroachment routine for steady state may not be applicable. This sub-task includes additional hydraulic modeling to establish the Floodway in either steady or unsteady state. Floodway analysis in 2D environment will be in conformance with *Guidance for Flood Risk Analysis and Mapping - Floodway Analysis and Mapping* (Nov 2016). In addition, hydraulic data for 2 and 10 percent annual chance floods will be included in the LOMR for FEMA to update the flood profiles in FIS.
- d) A hydraulic work map and annotated FIRM panel exhibit will be prepared to support the LOMR application. The work map will identify the logical transitions from the hydraulic modeling limits to the effective flood zone limits. This task may require additional hydraulic model modifications to extend or truncate the revised area to make the tie-ins on both upstream and downstream.
- e) The Consultant shall be responsible for addressing all of FEMA review comments in a timely manner. The contract will not be considered complete until FEMA has issued a LOMR or PMR. In the event the project extends beyond the review process timeline the District will approve additional services (Task III-4) for the Consultant to close out the FEMA process.
- f) Consultant will submit to each municipal jurisdiction and respond to their comments. Consultant will gather Community Acknowledgement signatures on the MT-2 forms.
- g) Consultant will coordinate with FEMA throughout the review process and will respond to up to two (2) additional information requests.
- h) The consultant shall include expense for the LOMR review, should FEMA deem it necessary.

Task II-6 - Public Involvement

It shall be the understanding of the consultant that the District may utilize interdepartmental agreements to perform some or all of the District owned sub-tasks of this Public Involvement Task.

- a) The District, in collaboration with Sonoran Institute, will provide materials educating the public on the state of the River and the goals and activities of the management plan.
- b) The Consultant shall participate and provide staff for nine (9) public meetings (three separate locations along the river, at two different times). Consultant understands that the District will arrange meeting location and set-up, provide computer hardware and accessories for power point presentation or coordinate with site host to provide them, notification to public and stakeholders, manage sign-in table, and update website with notice and any materials.
- c) The District shall be responsible for the preparation of handouts and display boards for meetings. The Consultant shall provide to the District, in digital format, information needed for the exhibits used at the public meetings.
- d) The Santa Cruz River Management Plan (Grant to Trico) website shall be hosted on the District website. Approved reports and documentation from the Consultant shall be submitted in a format (as specified by the District) that can be placed on the website. The District will provide final review and approval of all submittals for the website.

III. Tasks

Task III-1 – Project Administration

- a) Meetings: The Consultant shall participate in the following specific meetings for the Management Study:
 - 1. The Consultant shall attend a kick-off meeting with the District to submit the Phase II project schedule (in Microsoft project form), which will include dates of all proposed submittals and review meetings. The Consultant shall bring key project members to the meeting to introduce them to the District staff that will be working on the project.
 - 2. The Consultant shall meet weekly with the District's Project manager and monthly with the project team to discuss the overall project status. Any problems shall be identified and discussed. The Consultant shall take notes of all regularly scheduled monthly project meetings.
 - 3. The Consultant shall make up to two site visits as necessary to visualize and confirm findings from Phase 1 in the study area.
- b) Schedule
 - 1. The project schedule outline shall be consistent with the numbering and tasks defined in this scope of work.
 - 2. The consultant shall provide time line in a Microsoft Project format for tracking task completion. Schedule delays that do not affect a task or activity on the critical path will be made from schedule float and the completion date will not change.

Task III-2- Deliverables

- a) Reports and Documents: The following reports shall be prepared for this study;
 - 1. Alternatives Selection Report
 - 2. Implementation Plan
 - 3. Technical Data Notebook for LOMR submittal
 - 4. Santa Cruz River Management Plan (Summary Report)

5. Executive Summary (for presentation to Board and Municipal Councils)
6. Public Engagement Summary (by Sonoran Institute)
7. Stakeholder Engagement Report
8. Final Digital Documentation of All Materials provided on Hard Drive

Outlines of each deliverable should be submitted to the District PM for review and approval prior to commencing the preparation and compiling of said deliverable.

- b) The Consultant shall submit all items sealed by a registered civil engineer, landscape architect or surveyor in the State of Arizona, as appropriate. Upon receipt of the final submittal, the District shall review the report and preliminary plans for the accurate incorporation of all final comments. If incomplete and/or incorrect incorporation of those comments is found, the original documents shall be returned to the Consultant for corrections and resubmittal.
- c) The Consultant shall submit computer files of the information to the District delivered on digital media.
- d) The Consultant shall submit electronic copies for each draft report, and no more than 6 hard copies of the final report to the District.

Task III-3 – Owner’s Contingency

The District shall have a contingency task to account for the unknown. Services performed under this task are at the discretion of the District and will only be authorized in writing by the District’s Project Manager. This task will be a lump-sum task that can be utilized for unexpected items not specifically outlined in the scope of services but that become required as the project progresses.

Task III-4 – Additional Services

The Consultant shall be prepared to provide additional services as-needed in support of Tasks III-IV. These may include but not be limited to: geotechnical and materials analysis, survey, drone mapping capability, geophysical analysis (including excavation or borings to determine as-built condition), groundwater hydrology, structural engineering, landscape architecture, cultural resources, habitat evaluation, water quality and environmental services.

Out of Scope Items

Should the Consultant feel that the District, or any partner such as a city, town or agency staff, is requiring the Consultant to provide work that is not within the scope of the contract documents, the Consultant must notify the District Project Manager immediately in writing and describe the work, which the Consultant feels is out of scope. Such notification shall be provided to the District Project Manager prior to the commencement of any such out of scope work.

It is the Consultant’s sole responsibility to assure that no additional services beyond the Scope of Work defined in the contract documents shall commence without the written authorization of the District Project Manager.

Retroactive requests for additional fee shall neither be considered nor approved.

(The remainder of this page is intentionally left blank)

Santa Cruz River Management Plan

Attachment 1



©

1 inch = 2 miles



PIMA COUNTY

Pima County Regional Flood Control District
201 N. Stone Ave - 9th Floor
Tucson, Arizona 85701-1797
(520) 724-4800, FAX: (520) 724-4521
<http://www.rfcd.pima.gov>

The information depicted on this display is the result of digital analysis performed on a variety of databases provided and maintained by several governmental agencies. The accuracy of the information presented is limited to the collective accuracy of those databases on the date of the analysis. This Postal County Regional Flood Control District makes no claims regarding the accuracy of the information depicted herein. This analysis is subject to the GFD Division, Gloucester and Five Rivers.

		2019						2020												2021					
		July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
Stakeholder Alternatives Working Group	<i>Separate For Three Rivers, Cortaro Narrows and Marana Flats</i>																								
	Initial Meeting																								
	Identify Suite of Alternatives																								
	Refine Alternatives																								
	Development of Recommended Alternatives																								
Combined Stakeholder	<i>Meeting of all Stakeholders</i>																								
	Go to Stakeholders with Possible Alternatives																								
	Development of Implementation Plan																								
Public Process	<i>Separate For Three Rivers, Cortaro Narrows and Marana Flats</i>																								
	Mail Meeting Invitation																								
	Public 'Inform' and 'Solicit'																								
	Possible Alternatives																								
	Recommended Alternatives																								
Jurisdictional Process																									
	Inform about Flood Hazards and Infrastructure																								
	Ongoing Staff Level Participation																								
	Provide Plan and Propose Adoption																								



CMG DRAINAGE ENGINEERING, INC.

3555 N. Mountain Ave. • P.O. Box 64880 (mail) • Tucson, AZ 85728 • phone: (520) 882-4244 • fax: (520) 888-1421

FEE ESTIMATE

Project Name: Santa Cruz River Management Plan

Effective Date: October 1, 2019

I. CMG LABOR

PHASE 2

TASK II-1 - Stakeholder Involvement

Sub-Tasks II-1(a-b): Stakeholder Meetings (14)

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	16	\$ 2,368.00
Project Manager	\$ 133.00	168	\$ 22,344.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00	20	\$ 1,540.00
Clerical / Administration	\$ 56.00	7	\$ 392.00
Sub-Total		211	\$ 26,644.00

Sub-Tasks II-1(c): Minutes and Sign-in Sheets for Stakeholder Meetings

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	42	\$ 5,586.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00	14	\$ 1,428.00
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	4	\$ 224.00
Sub-Total		60	\$ 7,238.00

Sub-Tasks II-1(d): Monthly Coordination with Stakeholders

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	108	\$ 14,364.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00		\$ -
Sub-Total		108	\$ 14,364.00

Sub-Tasks II-1(e): Informational Meetings

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	25	\$ 3,325.00
Sr Project Engineer / Hydrologist	\$ 118.00	12	\$ 1,416.00
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00	6	\$ 462.00
Clerical / Administration	\$ 56.00	6	\$ 336.00
Sub-Total		49	\$ 5,539.00

Task II-1 Sub-Total 428 \$ 53,785.00

TASK II-2 - Alternatives Analysis and Recommendations**Sub-Tasks II-2(a): Identify Problem Areas**

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	16	\$ 2,128.00
Sr Project Engineer / Hydrologist	\$ 118.00	40	\$ 4,720.00
Project Engineer/Hydrologist	\$ 102.00	24	\$ 2,448.00
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00		\$ -
Sub-Total		80	\$ 9,296.00

Sub-Tasks II-2(b): Existing Constraints Map

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	12	\$ 1,596.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00	40	\$ 4,080.00
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00		\$ -
Sub-Total		52	\$ 5,676.00

Sub-Task II-2(c): Comprehensive List of Potential Alternatives

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	16	\$ 2,128.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00	40	\$ 4,080.00
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00		\$ -
Sub-Total		56	\$ 6,208.00

Sub-Task II-2(d): Alternative Scoring Criteria Development

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	24	\$ 3,192.00
Sr Project Engineer / Hydrologist	\$ 118.00	12	\$ 1,416.00
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	4	\$ 224.00
Sub-Total		40	\$ 4,832.00

Sub-Task II-2(e): Indexing Manning's roughness to vegetative growth

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	8	\$ 1,064.00
Sr Project Engineer / Hydrologist	\$ 118.00	24	\$ 2,832.00
Project Engineer/Hydrologist	\$ 102.00	60	\$ 6,120.00
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00	24	\$ 1,848.00
Clerical / Administration	\$ 56.00		\$ -
Sub-Total		116	\$ 11,864.00

Sub-Task II-2(f): Scoring and Ranking of Alternatives

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	40	\$ 5,320.00
Sr Project Engineer / Hydrologist	\$ 118.00	30	\$ 3,540.00
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	4	\$ 224.00
Sub-Total		74	\$ 9,084.00

Sub-Task II-2(g): Update Hydraulic Models for Alternatives

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	40	\$ 5,320.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00	120	\$ 12,240.00
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00		\$ -
Sub-Total		160	\$ 17,560.00

Sub-Task II-2(h): Detailed Sediment Transport Assessment

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	12	\$ 1,776.00
Project Manager	\$ 133.00	88	\$ 11,704.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00	56	\$ 5,712.00
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00	36	\$ 2,772.00
Clerical / Administration	\$ 56.00		\$ -
Sub-Total		192	\$ 21,964.00

Sub-Task II-2(i): Final Alternative Selection and Development

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	4	\$ 592.00
Project Manager	\$ 133.00	40	\$ 5,320.00
Sr Project Engineer / Hydrologist	\$ 118.00	40	\$ 4,720.00
Project Engineer/Hydrologist	\$ 102.00	90	\$ 9,180.00
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00		\$ -
Sub-Total		174	\$ 19,812.00

Sub-Task II-2(j): District's Contingency (See II. Contingency below)

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00		\$ -
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00		\$ -
Sub-Total		0	\$ -

Task II-2 Sub-Total 944 \$ 106,296.00

TASK II-3 - Implementation Plan Development

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	4	\$ 592.00
Project Manager	\$ 133.00	80	\$ 10,640.00
Sr Project Engineer / Hydrologist	\$ 118.00	40	\$ 4,720.00
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00	40	\$ 3,560.00
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	10	\$ 560.00
Sub-Total		174	\$ 20,072.00
Task II-3 Sub-Total		174	\$ 20,072.00

TASK II-4 - Baseline Hydraulic Model Updates

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	16	\$ 2,128.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00	80	\$ 8,160.00
Designer	\$ 89.00	24	\$ 2,136.00
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00		\$ -
Sub-Total		120	\$ 12,424.00
Task II-4 Sub-Total		120	\$ 12,424.00

TASK II-5 - Letter of Map Revision (Optional)

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	2	\$ 296.00
Project Manager	\$ 133.00	80	\$ 10,640.00
Sr Project Engineer / Hydrologist	\$ 118.00	160	\$ 18,880.00
Project Engineer/Hydrologist	\$ 102.00	250	\$ 25,500.00
Designer	\$ 89.00	120	\$ 10,680.00
CADD Tech	\$ 77.00	200	\$ 15,400.00
Clerical / Administration	\$ 56.00	10	\$ 560.00
Sub-Total		822	\$ 81,956.00
Task II-5 Sub-Total		822	\$ 81,956.00

TASK II-6 - Public Involvement**Sub-Tasks II-6(b): Public Meetings at 3 Locations (9)**

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	91	\$ 12,103.00
Sr Project Engineer / Hydrologist	\$ 118.00	32	\$ 3,776.00
Project Engineer/Hydrologist	\$ 102.00	32	\$ 3,264.00
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	10	\$ 560.00
Sub-Total		165	\$ 19,703.00

Sub-Tasks II-6(c-d): Exhibit and Website Coordination with District PR

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00		\$ -
Project Manager	\$ 133.00	36	\$ 4,788.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00	36	\$ 3,204.00
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	6	\$ 336.00
Sub-Total		78	\$ 8,328.00
Task II-6 Sub-Total		243	\$ 28,031.00

TASK III-1 - Project Administration**Sub-Task III-1(a): Meetings & Site Visits**

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	3	\$ 444.00
Project Manager	\$ 133.00	134	\$ 17,822.00
Sr Project Engineer / Hydrologist	\$ 118.00	35	\$ 4,130.00
Project Engineer/Hydrologist	\$ 102.00	15	\$ 1,530.00
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	18	\$ 1,008.00
Sub-Total		205	\$ 24,934.00

Sub-Task III-1(b): Schedule

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	2	\$ 296.00
Project Manager	\$ 133.00	51	\$ 6,783.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00		\$ -
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	4	\$ 224.00
Sub-Total		57	\$ 7,303.00

Task III-1 Sub-Total

262 \$ 32,237.00

TASK III-2 - Deliverables**Sub-Task III-2(a-1): Alternatives Selection Report**

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	2	\$ 296.00
Project Manager	\$ 133.00	40	\$ 5,320.00
Sr Project Engineer / Hydrologist	\$ 118.00	40	\$ 4,720.00
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00	100	\$ 8,900.00
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	5	\$ 280.00
Sub-Total		187	\$ 19,516.00

Sub-Task III-2(a-2): Implementation Plan

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	1	\$ 148.00
Project Manager	\$ 133.00	24	\$ 3,192.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00	40	\$ 4,080.00
Designer	\$ 89.00	40	\$ 3,560.00
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	5	\$ 280.00
Sub-Total		110	\$ 11,260.00

Sub-Task III-2(a-3): Technical Data Notebook for LOMR Submittal

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	4	\$ 592.00
Project Manager	\$ 133.00	20	\$ 2,660.00
Sr Project Engineer / Hydrologist	\$ 118.00	60	\$ 7,080.00
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00	60	\$ 5,340.00
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	4	\$ 224.00
Sub-Total		148	\$ 15,896.00

Sub-Task III-2(a-4): Santa Cruz River Management Plan (Summary Report)

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	2	\$ 296.00
Project Manager	\$ 133.00	40	\$ 5,320.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00	80	\$ 7,120.00
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	5	\$ 280.00
Sub-Total		127	\$ 13,016.00

Sub-Task III-2(a-5): Executive Summary (BOS/Council Presentation)

Personnel	Rate*	Hours	Fee
Project Principal	\$ 148.00	1	\$ 148.00
Project Manager	\$ 133.00	20	\$ 2,660.00
Sr Project Engineer / Hydrologist	\$ 118.00		\$ -
Project Engineer/Hydrologist	\$ 102.00		\$ -
Designer	\$ 89.00	12	\$ 1,068.00
CADD Tech	\$ 77.00		\$ -
Clerical / Administration	\$ 56.00	2	\$ 112.00
Sub-Total		35	\$ 3,988.00

Task III-2 Sub-Total	607	\$	63,676.00
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TOTAL CMG LABOR	3,600	\$	398,477.00
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* Fully Burdened Rate includes overhead at (127)% of labor and profit at (8)% of labor and overhead.

II. Contingency

District's Contingency (Task III-3)	\$	50,000.00
Additional Services (Task III-4)		TBD

III. ESTIMATE OF DIRECT EXPENSES

Deliverables (6 hard copies of each final report)	\$	8,000.00
FEMA Review Fees	\$	15,000.00
General large format scanning & plotting	\$	1,500.00
General in-house photocopying	\$	1,200.00

TOTAL DIRECT EXPENSES	\$	25,700.00
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IV. OTHER SUBCONSULTANT SERVICES**Supplemental Engineering Services**

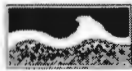
Subconsultant	\$	99,524.04
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Recreation, Riparian Habitat, Water Resources, Supplemental Engineering

Subconsultant	\$	177,535.60
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TOTAL OTHER SUBCONSULTANT SERVICES	\$	277,059.64
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TOTAL NOT-TO-EXCEED PROJECT COST	\$	751,236.64
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**CMG DRAINAGE
ENGINEERING, INC.**

3555 N. Mountain Ave. • P.O. Box 64880 (mail) • Tucson, AZ 85728 • phone: (520) 882-4244 • fax: (520) 888-1421

PROJECT COST SUMMARY

Project Name: Santa Cruz River Management Plan
Date: August 12, 2019

I. ESTIMATE OF DIRECT LABOR

PHASE 2

TASK II-1 - Stakeholder Involvement

CMG Drainage Engineering	\$ 53,785.00
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	\$ 53,785.00
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TASK II-2 - Alternatives Analysis and Recommendations

CMG Drainage Engineering	\$ 106,296.00
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JE Fuller Hydrology & Geomorphology	\$ 28,663.36
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Kimley-Horn & Associates, Inc.	\$ 137,605.66
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	\$ 272,565.02
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TASK II-3 - Implementation Plan Development

CMG Drainage Engineering	\$ 20,072.00
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Kimley-Horn & Associates, Inc.	\$ 21,684.39
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	\$ 41,756.39
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TASK II-4 - Baseline Hydraulic Model Updates

CMG Drainage Engineering	\$ 12,424.00
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	\$ 12,424.00
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TASK II-5 - Letter of Map Revision (Optional)

CMG Drainage Engineering	\$ 81,956.00
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JE Fuller Hydrology & Geomorphology	\$ 57,518.12
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	\$ 139,474.12
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TASK II-6 - Public Involvement

CMG Drainage Engineering	\$ 28,031.00
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JE Fuller Hydrology & Geomorphology	\$ 4,475.52
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Kimley-Horn & Associates, Inc.	\$ 4,500.37
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	\$ 37,006.89
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TASK III-1 - Project Administration

CMG Drainage Engineering	\$ 32,237.00
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JE Fuller Hydrology & Geomorphology	\$ 7,867.04
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Kimley-Horn & Associates, Inc.	\$ 13,745.18
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	\$ 53,849.22
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TASK III-2 - District Contingency

CMG Drainage Engineering	\$ 63,676.00
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Kimley-Horn & Associates, Inc.	
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	\$ 63,676.00
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TASK III-3 - Contingency

District Contingency	\$ 50,000.00
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TOTAL LABOR

	\$ 724,536.64
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II. ESTIMATE OF DIRECT EXPENSES

CMG Drainage Engineering	\$ 25,700.00
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JE Fuller Hydrology & Geomorphology	\$ 1,000.00
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TOTAL DIRECT EXPENSES

	\$ 26,700.00
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TOTAL NOT-TO-EXCEED PROJECT COST

	\$ 751,236.64
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EXHIBIT "B" – COMPENSATION SCHEDULE, Attachment 1
(Page 8 of 10)

PROJ: Pima County Procurement Department Solicitation for Qualifications No. 272080
Santa Cruz River Management Plan Phase 2: Grant Road to Trico Road
DETAIL: JE Fuller Fee Estimate based on CMG Exhibit A dated and received 7-29-2019

			Hours by staff (see classes below)		Total	Total
Task	Description	JEF Role	PM	PE	Hours	Labor
II-2 c.1	Alternatives Analysis & Recommendations; Potential Alternatives, 1. Flood Safety	Support	\$149.81	\$124.32	24	\$3,289.56
II-2 h	Alternatives Analysis & Recommendations; Update Hydraulic Models for Alternatives (up to 40)	Support	12	12	200	\$25,373.80
II-5 c	Remap FEMA floodway & 1% and 0.2% annual chance floods in 2D area	Lead (for 2D area only)	20	180	270	\$34,331.10
II-5 d	FEMA LOMR hydraulic workmap and annotated FIRM	Support	30	240	90	\$11,443.70
II-5 g	FEMA LOMR Coordination	Support	10	80	92	\$11,743.32
II-6 b	Public Involvement - Staffing for 6 meetings (3 locations, 2 different times)	Support	12	80	36	\$4,475.52
III-1	Project Administration (18 months, KO meeting and others as needed)	Support	16	44	60	\$7,867.04
					Total Hours/Labor	772
					Expenses (reproduction). Does not include FEMA review fees	\$98,524.04
PM	Project Manager					TOTAL ESTIMATED FEE
PE	Professional Engineer					\$99,524.04

EXHIBIT B
PIMA COUNTY PROCUREMENT DEPARTMENT
DERIVATION OF COST PROPOSAL SUMMARY
Santa Cruz River Management Plan: Grant Road to Trico Road

ESTIMATED DIRECT LABOR:

<u>Classification</u>	<u>Estimated Hours</u>	<u>Hourly Rate</u>	<u>Labor Costs</u>
Sr. Professional	-	\$74.42	\$0.00
Sr. Engineer	235	\$59.00	\$13,865.00
Professional	-	\$53.06	\$0.00
Registered Landscape Architect	317	\$59.00	\$18,703.00
Junior Engineer	220	\$44.83	\$9,862.60
Junior Professional	340	\$37.19	\$12,644.60
Project Accountant	12	\$44.00	\$528.00
Admin Support	12	\$21.40	\$256.80
Total Estimated Labor	1,136		\$ 55,860

OVERHEAD

Overhead (Audited Overhead Rate)	194.28%	\$ 108,525
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ESTIMATED DIRECT EXPENSES

Delivery Courier	\$0
Reproduction	\$0
Total Estimated Direct Expenses	\$ -

<u>PROFIT (DIRECT LABOR + OVERHEAD) X 8.0%</u>	\$ 13,151
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<u>TOTAL COST</u>	\$ 177,536
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Estimate of Work Hours

Santa Cruz River Management Plan Phase 2: Grant Road to Trico Road

	No. Sht's	Sen. Prof.	Senior Eng.	Profess.	Reg. L.A.	Junior Eng.	Junior Profess.	Admn I	Admn II	Total Hours
Task II-1 - Stakeholder Involvement										
N/A	N/A									0
Task II-2 - Alternatives Analysis and Recommendations										
c. Generate a comprehensive list of potential alternatives (up to 40 in quantity)	N/A				24					24
d. Prepare an Alternative Scoring Criteria based on ENVSP ranking process	N/A				32					32
e. Facilitate an Alternatives Identification workshop for each management reach	N/A				12					12
g. Score and rank alternatives using scoring criteria from Task D	N/A				40					40
j. 15% design and conceptual cost estimates for up to sixteen (16) structural alternatives	N/A		210		100	185	185			680
ji. Utility Research Contingency item	N/A		10			35	35			80
Task II-3 - Implementation Plan										
Prepare up to ten (10) artistic renderings (either plan or elevation perspective)	N/A				40		120			160
Task II-4 - Baseline Hydraulic Model Updates										
N/A	N/A									0
Task II-5 - Letter of Map Revision (Optional)										
N/A	N/A									0
Task II-6 - Public Involvement										
b. Attend up to six (6) public meetings	N/A				24					24
Task III-1 - Project Administration										
a. Attend one (1) kick-off meeting, general project administration, & familiarization with Phase I data	N/A		15		45			12	12	84
TOTAL MAN HOURS		0	235	0	317	220	340	12	12	1136