# THIS IS A PROPOSED DRAFT AND WILL BE REPLACED BY THE FINAL, SIGNED ORDINANCE OR RESOLUTION ADOPTED BY THE CITY COUNCIL.

### **ORDINANCE**

APPROVING THE EXECUTION OF AN INTERLOCAL AGREEMENT WITH BEXAR COUNTY TO ACCEPT AND APPROPRIATE FUNDS IN THE AMOUNT OF \$263,958.00 INTO THE STORM WATER OPERATION FUND FROM BEXAR COUNTY FOR THE COMPLETION OF THE KAMPMANN BOULEVARD PRELIMINARY ENGINEERING REPORT.

\* \* \* \* \*

WHEREAS, Kampmann Boulevard has an undersized underground drainage system from Babcock Road to Woodlawn Lake, thereby causing flooding on Kampmann Boulevard and abutting properties; and

WHEREAS, in September 2012, AECOM conducted the Upper Woodlawn Lake Drainage Study to evaluate potential improvements to drainage, thereby alleviating flooding in the Woodlawn Lake watershed; and

**WHEREAS**, to provide feasible solutions, a Preliminary Engineering Report (PER) is required to summarize the analysis of existing issues with drainage on the basis of current data; and

WHEREAS, the City of San Antonio will manage the execution of the PER, whose scope will include managing projects, outreaching to the public, collecting data, hydrologic modeling, reviewing existing conditions, such as previous hydraulic and hydrologic models, proposed conditions, and alternative analyses, and preparing a final PER; and

WHEREAS, the PER will assess potential solutions to relieve residents and businesses from flooding along Kampmann Boulevard; and

WHEREAS, the PER will model the existing system to current hydraulic and hydrologic standards and identify potential solutions and/or alternatives, including downstream impacts, constructability, and cost; and

WHEREAS, the PER's anticipated completion is in July 2023; and

WHEREAS, this ordinance approves the execution of an Interlocal Agreement between the City of San Antonio and Bexar County, thereby accepting funds from Bexar County in an amount not to exceed \$263,958.00 for the completion of a PER of Kampmann Boulevard, and authorizes the appropriation of these funds from Bexar County to the Kampmann Boulevard (Babcock Road-Woodlawn Lake) project; NOW THEREFORE:

MR 01/26/23 Item No. 22-189050

## BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAN ANTONIO:

**SECTION 1.** The City Manager or designee is authorized to execute an Interlocal Agreement, which is attached to and incorporated in this document as **Exhibit B**, between the City of San Antonio and Bexar County, thereby accepting funds from Bexar County in an amount not to exceed \$263,958.00 for the completion of a Preliminary Engineering Report of Kampmann Boulevard, which is attached to and incorporated in this document as **Exhibit A**.

**SECTION 2.** Funds received for this ordinance for Interlocal Agreement will be deposited and appropriated in Fund 29070000, Internal Order 223000000071 and General Ledger 6301120.

**SECTION 3.** Funds in the amount of \$263,958.00 for this ordinance are authorized to be appropriated in Fund 29070000, Cost Center 2304070001, and General Ledger 5201170 and amends the Fiscal Year 2023 Adopted Budget.

**SECTION 4.** The financial allocations in this Ordinance are subject to approval by the Deputy Chief Financial Officer, City of San Antonio. The Deputy Chief Financial Officer may, subject to concurrence by the City Manager or the City Manager's designee, correct allocations to specific Cost Centers, WBS Elements, Internal Orders, General Ledger Accounts, and Fund Numbers as necessary to carry out the purpose of this Ordinance.

**SECTION 5.** This Ordinance is effective immediately upon the receipt of eight affirmative votes; otherwise, it is effective ten days after passage.

| PASSED AND APPROVED thisth o    | day of January 2023. |          |                     |   |   |
|---------------------------------|----------------------|----------|---------------------|---|---|
|                                 | M                    |          | <b>Y</b><br>Nirenbe |   | R |
| ATTEST: APPROVED AS TO FO       | RM:                  |          |                     |   |   |
| Debbie Racca-Sittre, City Clerk | Andrew Segovia, Ci   | ity Atto | rney                | _ |   |

## **EXHIBIT A**



## **EXHIBIT B**



## BEXAR COUNTY COMMISSIONERS COURT

## PUBLIC WORKS DEPARTMENT Capital Improvement Projects

## COURT ORDER

ORDER authorizing the approval of the Interlocal Agreement between Bexar County and the City of San Antonio setting forth terms and conditions under which Bexar County agrees to provide funding to the City of San Antonio in an amount not to exceed \$263,958 for the Kampmann Blvd Preliminary Engineering Report (PER) (Precinct 2), and approval of associated budget transfer.

Consent Agenda Item # 22

PASSED THIS 25TH DAY OF OCTOBER, 2022

STATE OF TEXAS § INTERLOCAL AGREEMENT FOR

COUNTY OF BEXAR § KAMPMANN BLVD PER

#### INTRODUCTION

- A. This Agreement is entered into by the County and City pursuant to the authority granted by the provisions of both (1) the Interlocal Cooperation Act which is found in Chapter 791, Texas Government Code, and (2) Chapter 581, the Local Government Code (i.e., Section 561.002).
- B. This Agreement is intended to further the purpose of the Interlocal Cooperation Act by increasing the efficiency and effectiveness of local governments and assist with flood control efforts in the City and County.
- C. Pursuant to Section 791.028, Texas Government Code, a local government, such as City may contract with another local government, such as County, to pay jointly all or part of the costs for engineering of the Project (as that particular term is defined in Section 1.01, below), and may pledge County revenues to make the reimbursements required by such contract.
- D. The Parties find that the engineering and financing of the Project would benefit both City and County, and City finds that undertaking such a project will serve to remove flooding on its public streets and the private property of its local residents and businesses.

NOW THEREFORE, for and in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, the Parties separately agree as follows:

## ARTICLE I PURPOSE AND TERM

1.01 The purpose of this Agreement is to set forth the terms and condition under which County agrees to provide funding to City in an amount not-to-exceed TWO HUNDRED AND SIXTY-THREE THOUSAND, NINE HUNDRED AND FIFTY-EIGHT AND NO/100 DOLLARS (\$263,958.00) (the "Maximum Not To Exceed Amount") for costs actually incurred by City in connection with obtaining a Preliminary Engineering Report ("PER") that provides flooding solutions for Kampmann Blvd (the "Project"). The "Maximum Not To Exceed Amount" includes

- a 10% contingency in the amount OF TWENTY-THREE THOUSAND, NINE-HUNDRED AND NINETY-SIX AND NO/100 DOLLARS (\$23,996.00). The Project scope includes project management, public outreach, data collection and hydrologic modeling, review of existing conditions and previous hydrologic and hydraulic models, proposed conditions and alternatives analysis, and preparation of a PER in order to assess potential flooding solutions, which would provide flooding relief to residents and businesses along Kampmann Blvd. A more detailed Scope of Work for the Project is further described in as <a href="Exhibit A">Exhibit A</a> attached herein and made a part hereof.
- 1.02 Engineering costs paid by the County for the Project under this Agreement will be the lesser of: (a) the total engineering cost for the Project (the "Total Engineering Cost"), or (b) the Maximum Not To Exceed Amount. Remaining funds upon completion of the Project shall be reimbursed to the County. All Project-related costs incurred by City which are in excess of the Maximum Not To Exceed Amount (the "Excess Amount") will be assumed by City.
- 1.03 This Agreement shall become effective upon the date of the last signatory party to this document ("Approval Date"). This Agreement will terminate one (1) year from the Approval Date (the "Notice Deadline") if a written "Notice to Proceed" regarding the actual beginning of the Project has not been issued by the City for that specific purpose by the Notice Deadline.

## ARTICLE II SERVICES

- 2.01 City agrees to provide to the County the Preliminary Engineering Report, including a Project Schedule, and the PER shall be subject to the review and approval of County. The City shall not make any substantial changes to the PER without the prior, written approval of County.
- 2.02 Subject to it adhering to all applicable procurement laws, rules, regulation, and ordinances associated with the Project, City shall (a) enter into a written contract (the "Engineering Contract") with Halff Associates, Inc. (the "Consultant") to oversee the Project, and (b) issue a Notice to Proceed to that Consultant to commence and complete the Project, all before the Notice Deadline. City shall be solely responsible for implementing any required changes to the Engineering Contract and its associated engineering schedule (the "Project Schedule"). City shall use its best efforts to cause the Consultant to diligently undertake and complete the Project within the Project Schedule. Should the Consultant fail to perform or abandon its obligations under the Engineering Contract, City agrees to diligently pursue all remedies to complete the Project including, without limitation, enforcement of all applicable subcontracts and performance bonds, within the original Project Schedule as both reasonably and commercially possible. City shall use commercially reasonable efforts in order to diligently and timely enforce all of its rights and remedies against the Consultant for the Project. For so long as City is pursuing all reasonable remedies against the Consultant in connection with its

breach of or default under, or alleged breach of or default under, of its duties and obligations under the Engineering Contract, City shall not be deemed in breach or default of this Agreement solely as a result such failure or refusal by Consultant.

# ARTICLE III PROJECT BUDGET

- 3.01 County will transfer lump sum funds to the City for the Maximum Reimbursable Amount. City shall submit backup documentation and a statement of expenses at request of the County.
- 3.02 Under no circumstances shall County be required to reimburse City for any engineering cost associated with the Project that is in excess of the Maximum Not To Exceed Amount.

## ARTICLE IV RESPONSIBILITY

- 4.01 City accepts full responsibility for the review of all work associated with the Project within the scope and purview of the recommendations under the Engineering Contract. County will provide both interim and final reviews of the PER
- 4.02 Each Party hereby separately makes the following representations, warranties, and covenants to the other Party as of the Effective Date, unless another date is expressly stated to apply:
  - A. The County is a political subdivision of the State of Texas.
  - B. The City is a Texas Home Rule Municipality.
  - C. It possesses all requisite governmental power and authority to enter into this Agreement and perform all of its obligations hereunder. The execution and performance by the Parties of this Agreement has been duly authorized by their respective governing bodies.
  - D. There are no legal actions or proceedings pending known to it which, if adversely determined, would materially and adversely affect the ability of such Party to fulfill its obligations under this Agreement.
  - E. It shall pay for the performance of governmental functions or services which are required under this Agreement only from its current revenues.

# ARTICLE V DESIGNATION OF REPRESENTATIVES

5.01 County hereby appoints the Director of the Bexar County Public Works/County Engineer (the "County Project Director") as its representative under this Agreement. The County Project Director shall be the primary point of contact for City in connection with the Project, unless County Project Director delivers to City, in writing, a notice designating another individual as Project Director.

5.02 City hereby appoints its City Manager, or his/her designee, as its designated representative under this Agreement (the 'City's Designated Representative"). Should City's Designated Representative appoint another individual to act as City's Designated Representative, City shall notify County of same in writing. City's Designated Representative shall be the primary point of contact for County.

## ARTICLE VI DEFAULT

6.01 In the event of a material breach of this Agreement, the non-breaching Party shall give the breaching Party written notice of such breach which shall detail the nature of the breach. The Party receiving the notice of breach shall be given at least thirty (30) days to cure the breach. If the breach is not corrected to the satisfaction of the non-breaching Party by the end of the thirty (30) day period, the non-breaching Party may (but has no obligation to) either: (a) provide for an extension if the breaching Party has commenced work to cure the breach and is making a good faith effort to complete the work, or (b) give written notice of termination to the breaching Party and seek to recover damages not to exceed the amount paid by the non-breaching Party for the project.

### ARTICLE VII ENTIRE AGREEMENT

7.01 This Agreement, including <u>Exhibit A</u>, constitutes the entire agreement of the Parties regarding the subject matter of this Agreement and supersedes all previous agreements and understandings, whether written or oral, relating to such subject matter. If there is a conflict between or among the provisions of this Agreement and any of the following items, the order of precedence shall be as follows: (a) the Agreement, (b) <u>Exhibit A</u>.

# ARTICLE VIII ASSIGNMENT OR TRANSFER OF INTEREST

8.01 Neither Party may assign any of its respective rights, privileges, or obligations under this Agreement in whole, or in part, without the prior written consent of the other Party. Any such attempt to assign without such approval shall be void.

## ARTICLE IX LEGAL CONSTRUCTION

9.01 In case any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalid, illegal, or unenforceable provision shall not affect any other provision hereof, and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

#### ARTICLE X

## COMPLIANCE WITH LAWS AND ORDINANCES

10.01 Both Parties shall comply with all applicable federal, state, and local laws and ordinances in connection with the respective duties, obligations, work and services to be performed or provided under this Agreement.

## ARTICLE XI TEXAS LAW TO APPLY

11.01 This Agreement shall be construed under and in accordance with the laws of the State of Texas, and all obligations of the Parties created hereunder are performable in Bexar County, Texas.

## ARTICLE XII AMENDMENT

12.01 No amendment, modification, or alteration of the terms hereof shall be binding unless the same be in writing, dated subsequent to the date hereof, and be duly executed by the Parties hereto.

### ARTICLE XIII NOTICES

13.01 All notices provided to be given under this Agreement shall be in writing and shall either be personally served against a written receipt therefore or given by certified mail or registered mail, return receipt requested, postage prepald and addressed to the proper Party at the address which appears below, or at such other address as the Parties hereto may hereafter designate in accordance herewith, unless a provision of this Agreement designates another Party and provides an address. All notices given by mail shall be deemed to have been given at the time of deposit in the United States mail and shall be effective from such date.

If to COUNTY: Bexar County Judge

Bexar County Commissioners Court

Paul Elizondo Tower 101 W. Nueva, Suite 1019 San Antonio, Texas 78205

With a copy to:

Director of Public Works

Bexar County Public Works Department

1948 Probandt

San Antonio, Texas 78214

If to CITY:

City Manager

City of San Antonio, Texas 115 Plaza De Armas, 2nd Floor San Antonio, Texas 78205

and

MR 01/26/23 Item No. 22-189050

> City Attorney City of San Antonio, Texas 203 S. St. Mary's Street, 2nd Floor San Antonio, Texas 78283

## ARTICLE XIV FORCE MAJEURE

- 14.01 Neither Party shall be responsible for delays or lack of performance by such entity or its elected officials, agents or employees which result from any act that is: (a) beyond that entity's reasonable control, and (b) not caused by, resulting from or arising out of the negligence or willful misconduct of that same entity's delay or inability (or alleged inability) to perform including, without limitation, acts of God, strikes, or other labor disturbances, or delays by federal or state officials in issuing necessary regulatory approvals and/or licenses (each, an "Event of Force Majeure"). In the event of any delay or failure excused by this Section, the time of delivery or of performance shall be extended for a reasonable time period to compensate for delay.
- 14.02 The Party claiming an Event of Force Majeure under this Article shall promptly give the other Party written notice of such claim (but in no less than five (5) days after the event or incident which gave rise to such claim). Such notice must include, at a minimum: (a) a detailed description of the event or incident giving rise to such claim, and (b) the known or estimated duration of such delay or inability to perform.

## ARTICLE XV MULTIPLE COUNTERPARTS

15.01 This Agreement may be executed in separate identical counterparts by the Parties hereto and each counterpart, when so executed and delivered, will constitute an original instrument, and all such separate identical counterparts will constitute but one and the same instrument.

{The remainder of this page shall intentionally remain blank.}

EXECUTED IN DUPLICATE ORIGINALS, EACH OF WHICH SHALL HAVE THE FULL FORCE AND EFFECT OF AN ORIGINAL, ON THIS THE 25 DAY OF October, 2022.

| COUNTY OF BEXAR  By:  | CITY OF SAN ANTONIO, TEXAS  |
|---|---|
| NELSON/W. WOLFF<br>County Judge   | By:<br>ERIK WALSH City Manager  |
| APPROVED AS TO LEGAL FORM:  | APPROVED AS TO LEGAL FORM:  |
| JUAN A. ROQUE<br>Assistant Criminal District Attorney -<br>Civil Division | ANDREW SEGOVIA<br>City Attorney   |
| APPROVED AS TO FINANCIAL CONTENT:   | APPROVED:   |
| County Auditor  | RAZI HOSSEINI, P.E., R.P.L.S.<br>Director of Public Works/City Engineer |
| DAVID SMITH<br>County Manager   |   |
| RENEE D. GREEN, P.E. Director of Public Works/County Engineer             |   |

MR 01/26/23 Item No. 22-189050

## **EXHIBIT A**

Scope of Work and Fee Schedule

### **EXHIBIT A**

### SECTION 1

### BASIS FOR COMPENSATION:

- 1.01 Amount of Payment
  - A. The CITY shall receive as payment for the work performed under this Agreement the total amount not to exceed \$263,958.00, unless a modification of the Agreement is approved in writing by the COUNTY.
  - B. The CITY will be paid for the work performed under this Agreement in accordance with the following schedule:

### Consultant Services

1. Kampmann Blvd PER \$239.962.00

10% Contingency \$ 23,996.00

Total Items Not to Exceed \$263,958.00

1.02 CITY shall proceed with services listed under 1.01 B.

#### SECTION 2

#### CONSULTANT'S PROPOSAL/FEE SCHEDULE

(See Attached)

Kampmann Blvd PER

- Exhibit A -

Page 1 of 7



May 4, 2022

Abigail Knott, PE, CFM Senior Engineer CoSA Public Works Department PO Box 839966 San Antonio, TX 78283-3966

RE: Kampmann Blvd PER

Ms. Knott,

The Gty of San Antonio, in partnership with Bexar County, has directed Halff to identify drainage improvements located in the East Woodlawn Ditch Watershed (EWDW) and prepare a Preliminary Engineering Report (FER) of hydrologic and hydraulic analysis (H&H) that evaluates flood risk reduction alternatives along the East Woodlawn ditch/Kampmann Storm Sewer System, generally from Babcock Road (just downstream of the Laddie I detention pond) to Woodlawn Lake.

The scope of services and fee estimate proposed for this project consist of the following:

#### Scope of Services

#### Task 1 - Project Management

Halff project management activities shall include task leadership and direction, telephone and written communication, project status reports, project progress meetings, project invoicing, and personnel and data management among other general project management activities. Specific meetings beyond staff management coordination and regular communication include the following:

#### a. Project Coordination and Correspondence

- Tasks include resource allocation, schedule tracking, budget tracking, dient communication, quality control and team coordination.
- ii. Monthly project status reports shall be provided to the City with the monthly invoice. Progress shall include notes regarding work completed in the preceding billing cycle, work expected to be completed in the next cycle, and any outstanding questions or issues for discussion.

## b. Internal Stakeholder Meetings, Review Meetings, and Public Outreach

- Attend one (1) project kickoff meeting with staff from the City and Bexar County. The meeting will be coordinated by the Halff Project Manager and is intended to discuss key items such as project schedule, budget, and any specific directives. Halff will provide a preliminary schedule of tasks.
- Aftend up to three (3) progress meetings every two months, over the course of the project schedule, to discuss specific tasks such as data collection and inventory, model evaluation, field verification, project solutions & costs, etc.
- Three (3) stakeholder-review workshops to expedite Stormwater model review and alternatives development including:
  - a. Fre-Project Model Review
  - b. Draft Alternative Analysis Model Review
  - c. Final Alternatives model review

HALFF ASSOCIATES, INC.

SAN ANTONIO, TX 78258-3991

TEL (210) 798-1895 FAX (210) 798-1896 WWW.FALFECOM



Abigail Knott, PE, CFM CoSA Public Works April 1, 2022

- Meeting minutes shall be submitted to the City Project Manager within five (5) working days after each meeting.
- Attend up to two (2) public or neighborhood association meetings with the City and Bexar County to discuss process, findings, and recommended flood mitigation solutions. Halff will develop the necessary exhibits and/or presentation for these meetings.

#### c. Quality Assurance and Quality Control

- Quality Control: Technical data and analysis will be reviewed for accuracy, with appropriate comments and responses documented and submitted to the City at each relevant milestone.
- ii. Each task will be subjected to internal QC by one of Halff's Water Resources Professional Engineers. Associated documentation will be provided with the final report. The QA/QC program will include a multi-level approach to ensure that senior members review, comment, and approve the completed work. Quality control checklists shall be created for all deliverables.
- All project materials presented to the City as draft or final products will be accompanied by QA/QC certification.

### Task 2 - Data Collection & Hydrologic Modeling

Halff will use best available data to update the hydrologic parameters & models within the EWDW. All data, models and reporting updates resulting from this PER will be collected and organized in a way conducive to the development of a pre-project corrected effective model to be used in developing project alternatives for East Woodlawn Ditch.

#### a. Obtain and Review Available Data

- Halff will collect and catalogue all relevant GIS data including, but not limited to, storm drain network, terrain (LiDAR) Data, land use/zoning, FEMA (both mapping and loss data), planimetrics, political boundaries, development and subdivisions, detention pond locations, parcel information, etc.
- All GIS data gathered will be organized in Geodatabase and will be provided to the City.
- Hydrologic and hydraulic (H&H) models prepared as part of the Laddie Place Regional Storm Water Facility Phase I, II, & III Letter of Map Revision (Laddie LOMR) (2017) will be utilized. The model uses XPSWMM (1D)
- iv. Hydrologic and hydraulic (H&H) models prepared as part of the AECOM Drainage Study will be utilized and incorporated within the updated Laddie LOMR model.
- v. Additional models developed within the project boundary (if any) will also be requested. These may include models developed for regional detention pond projects, channel improvement projects, large scale developments, previous bond projects, San Antonio River Authority (SARA) models, COSA drainage reports, etc. A preliminary analysis of the models will be performed to determine relevance and incorporated as best available data.
- vi. Model results will be compared to the Laddie LOMR data and discrepancies will be identified. Harff will compare the effective floodplains to specific locations to help determine if the flooding is riverine or caused by a localized flooding issue. The H&H model and proposed alternatives associated with



Abigail Knort, PE, CFM CoSA Public Works April 1, 2022

Seeling Channel Phase IV and Seeling Ultimate Build-Out scenarios will be evaluated and included in the pre-project models as necessary.

- Record or "As-Built" drawings will be requested from the City for improvements including, but not limited to, creek improvements, detention ponds, storm sewer trunk line, and major developments.
   Specifically, those related to the Kampmann Project Area.
- viii. A cursory review of other drainage reports will be conducted to determine if the information provided impacts the larger study. Halff will review the scope, assumptions, methodologies, and recommendations of reports. If results were carried forward to design or construction, Halff will compare with the construction or record drawings for consistency. Constructed projects will be evaluated for consistency during the field verification phase, if needed. Halff will incorporate any LOMRs associated with East Woodlawn Ditch and incorporate into the Corrected Effective Hydraulics Model.
- ix. As the Laddie LOMR model included system information that was developed either by the City or Bexar County during the development of those projects, Halff assumes that no additional survey will be required for this PER, and if any is needed that will be considered additional services.

#### b. Field Reconnaissance

- Halff engineers will perform site reconnaissance visits (with City staff) to verify
  existing project conditions (prior to model development) and to walk the proposed
  alternatives alignments upon initial review.
- Detailed Field Survey is EXCLUDED from this proposal per conversations with CoSA and Bexar County representatives. Halff assumes that the detailed survey required for the Laddie LOMR and previous PER studies associated with the Kampmann system is adequate for the purposes of this study.

#### c. Hydrology Verification & Modeling

- i. This study will utilize best available hydrology information. Hydrologic data from the SARA CTP remapping efforts for the Upper San Antonio River watershed will be requested and utilized (if available); however, the spatial resolution (subbasin size) may need to be revised to account for the smaller subbasins associated with this project. The information from the 2017 Laddie Place LOMR drainage study will be verified and re-parameterized using the same methodology as the CTP study. Modify rainfall data to account for best available rainfall data (Atlas 14) developed by NO/A and adopted by the City of San Antonio.
- Atlas 14 rainfall data will be incorporated per City standards.
- iii. Provide all revised existing conditions hydrology models to the City at the completion of the study.
- iv. The 10-, 25-, 50-, 100-(Ultimate) and 500-year storm will be modeled relative to proposed solutions. Halff assumes the watershed is fully-developed, as such the 100-year storm will assumed to be equivalent to the 100-year Ultimate Condition.

#### Task 3 - Existing Conditions Hydraulics

Halff will start with the current effective (Laddie LOMR, presumably) model and identify and quantify impacts to the effective floodplain within East Woodlawn ditch due to changes in methodology, new data and man-made physical changes, creating a Corrected Effective Model (CEM) from which alternatives will be derived.



Abigail Knott, PE, CFM CoSA Public Works April 1, 2022

## a. Corrected Effective Model Development

- 1. Specific modeling adjustments include:
  - Converting 2017 Laddie Place LOMR drainage study model to XPSWMM version 2019.1.3 or 2020.1
  - b. Updating effective model with best available data including:
    - a. As-built construction plan data for projects completed with approved LOMRS
    - b. Any completed City projects
    - c. Updated Terrain
    - d. Updated hydrology
      - SARA DEIRM efforts
      - ii. At as 14
- 2. Halff will conduct an internal technical QC of the Corrected Effective Model.

#### b. Deliverables

- 1. XPSWMM models
- 2. Model technical guidance documentation
- 3. Supporting Model Data
- GIS Data Nodes, Links, floodplain mapping, 1D/2D specific modeling parameters (n-values, 1d/2c connections, connectors, etc.)
- 5. Floodplain Work Maps

#### Task 4 - Alternative Analysis Hydraulics

The project is located in north central City of San Antonio, generally south of Loop 410, west of Fredericksburg Road, and east of Bandora Road. The goal of the alternative analysis is to determine conceptual projects whose goal is to eliminate structural flooding along Kampmann Bivd. and East Woodlawn Ditch; Additionally, the project alternatives will consider mobility improvements and flood velocity improvements for street flooding.

The analysis will include the 10-, 25-, 50-, 100- (Ultimate), and 500- year design storms and will focus on maximizing the mitigation potential for the 100-year storm. All modeling will be performed most up to date XPSWIMM software. The goals of this task are to evaluate previous studies proposed projects for constructability and analyze four (4) alternatives for reducing flood risk.

#### a. Previous Study Evaluation

Haiff will incorporate (with updated model hydrology, terrain, etc.) a previously proposed drainage bypass from the Kampmann Storm Sewer System into the Existing Conditions model (AECOM study circa 2012). Bypass is proposed along Quentin Road to Wilson Blvd, then moving south to Woodlawn Ave. Results will be evaluated for constructability and feasibility, as well as effectiveness relative to flood depth reductions.

#### b. Alternative Analysis

Halff will develop up to three (3) structural flood mitigation alternative scenarios designed to mitigate flood risk from the East Woodlawn Ditch and local flooding upstream of Woodlawn Lake using the results obtained in the Existing Conditions Analysis. Additionally, Halff will evaluate the cost/benefit of buying out the



Abigail Knott, PE, CFM CoSA Public Works April 1, 2022

structures along Kampmann that are in the 100-year floodplain per the corrected effective model. The scenarios will focus on reducing flood risk for UPTO the 100-year design storm within the areas of the East Woodlawn Ditch Watershed. The solutions to be considered are as follows:

- Kampmann Storm Sewer System Culvert Improvements: Halff will model analyze the impact of increased sizing of Kampmann Stow Sewer System from Babcock Road to Woodlawn Ave on the EWDW floodplain.
- Bypass Alternative: Halff will develop a bypass alternative that will analyze the potential of bypass solutions throughout the EWDW floodplain, (not in the same western alignment as the 2012 AECOM study).
- Detention Sensitivity Analysis: Halff will conduct sensitivity analysis of proposed detention in Unused lots and Open fields within the East Woodlawn Drain Watershed.
  - a. Preliminary investigation of aerial imagery does not show much undeveloped property in the upper part of the Kampmann system downstream of the Laddie detention ponds. As such, Halff will evaluate detention sensitivity analysis to estimate the volume of storage required to reduce and eliminate structure flooding along Kampmann.
  - If the sensitivity analysis yields favorable results, Halff will coordinate with City/County staff to identify potential properties for possible detention locations.
- 4. Buyouts and Elevation Certificates Evaluation: Halff will conduct an appraisal evaluation and buyout analysis for structures remaining within the corrected effective existing conditions floodplain or consider which structures may benefit from Elevation Certificates to remove them from the regulatory floodplain. Note that survey of finished floor dievations is not included but can be conducted as an additional service if necessary.

#### c. Alternative Evaluations

- No Adverse Impact: All proposed structural mitigation alternatives will be analyzed and created with a noadverse impacts analysis so that if projects are chosen to move forward for future design and/or construction they will meet applicable City criteria.
- Benefit / Cost: Halff will conduct a Denefit-Cost Analysis to quantify economic impacts of proposed project solutions. Results will be presented at the preliminary concepts meeting. The benefit cost will consider annualized benefits (flood depth reduction at structures) versus annualized cost of the project.

#### Task 5 - Preliminary Engineering Report

#### d. PER Narrative

The Preliminary Engineering Report submittal will include the project deliverables; a detailed narrative discussing the data collection and inventory process, compilation of all the data collected and evaluated, updated digital information including GIS, H&H models, photos, conceptual solutions, schematic renderings, and a prioritized project plan.

#### e. Digital Data & Deliverables



Abigal Knott, PE, CFM CoSA Public Works April 1, 2022

- 1. XPSWMM models
- 2. Model technical guidance documentation
- 3. Supporting Model Data
- GIS Data Nodes, Links, floodplain mapping, 1D/2D specific modeling parameters (n-values, 1d/2d connections, connectors, etc.)
- 5. Floodplain Work Maps
- 6. Opinion of Probable Costs
- 7. Horizontal and vertical layouts of proposed improvements
- 8. Typical sections as necessary
- 9. Results of Benefit Cost Analysis

#### FEE SUMMARY

| \$239,962.00 | Total Fee:                                     |
|--------------|--|
| \$ 31,036.00 | lask 5 – Preliminary Engineering Report        |
| \$110,159.00 | Task 4 – Proposed Conditions Hydraulics        |
| \$ 18,204.00 | Task 3 – Existing Conditions Hydraulics        |
| \$ 39,051.00 | Task 2 – Data Collection & Hydrologic Modeling |
| \$ 41,512.00 | Task 1 – Project Management and Outreach       |
|              | Fask 1 - Project Management and Outreach       |

Halff estimates the PER will be completed in approximately <u>six (6) months from NTP</u>, pending typical City review times, from the date of notice to proceed to perform these services. Upon approval of the scope Halff will develop a more detailed scheduled for the PM. See also the attached fee worksheet, as well as fee breakdowns separated by team members and summarized on the last tab.

We appreciate this opportunity to work with you on this project. If you have any questions or need additional information please feel free to contact me by phone at (210) 704-1339 or email at <a href="mailto:jlogan@halff.com">jlogan@halff.com</a>.

Respectfully,

HALFF ASSOCIATES, INC.

Josh Logan, PE, CFM

Senior Project Manager and Water Resources Team Leader



