

PROFESSIONAL SERVICES AGREEMENT

Glenn Drive Storm Drain Study
59th to 52nd Avenues

This Professional Services Agreement ("Agreement") is entered into and effective between CITY OF GLENDALE, an Arizona municipal corporation ("City") and Gavan & Barker, Inc., an Arizona corporation, ("Consultant") as of the ____ day of _____, 2022 ("Effective Date").

RECITALS

- A. City intends to undertake a project for the benefit of the public and with public funds that is more fully set forth in **Exhibit A**, Project (the "Project");
- B. City desires to retain the professional services of Consultant to perform certain specific duties and produce the specific work as set forth in the attached **Exhibit B**, Project Scope of Work ("Scope");
- C. Consultant desires to provide City with professional services ("Services") consistent with best consulting or architectural practices and the standards set forth in this Agreement, in order to complete the Project; and
- D. City and Consultant desire to memorialize their agreement with this document.

AGREEMENT

The parties hereby agree as follows:

1. **Key Personnel; Other Consultants and Subcontractors.**

- 1.1 Professional Services. Consultant will provide all Services necessary to assure the Project is completed timely and efficiently consistent within Project requirements, including, but not limited to, working in close interaction and interfacing with City and its designated employees, and working closely with others, including other consultants or contractors, retained by City.
- 1.2 Project Team.
 - a. **Project Manager.**
 - (1) Consultant will designate an employee as Project Manager with sufficient training, knowledge, and experience to, in the City's opinion, complete the project and handle all aspects of the Project such that the work produced by Consultant is consistent with applicable standards as detailed in this Agreement; and
 - (2) The City must approve the designated Project Manager.
 - b. **Project Team.**
 - (1) The Project Manager and all other employees assigned to the Project by Consultant will comprise the "Project Team."
 - (2) Project Manager will have responsibility for and will supervise all other employees assigned to the Project by Consultant.
 - c. **Discharge, Reassign, Replacement.**
 - (1) Consultant acknowledges the Project Team is comprised of the same persons and roles for each as may have been identified in **Exhibit A**.
 - (2) Consultant will not discharge, reassign, replace or diminish the responsibilities of any of the employees assigned to the Project who have been approved by City without City's prior written consent unless that person leaves the employment of Consultant, in which event the substitute must first be approved in writing by City.

- (3) Consultant will change any of the members of the Project Team at the City's request if an employee's performance does not equal or exceed the level of competence that the City may reasonably expect of a person performing those duties, or if the acts or omissions of that person are detrimental to the development of the Project.

d. Subcontractors.

- (1) Consultant may engage specific technical contractors (each a "Subcontractor") to furnish certain service functions.
- (2) Consultant will remain fully responsible for Subcontractor's services.
- (3) Subcontractors must be approved by the City.
- (4) Consultant will certify by letter that all contracts with Subcontractors have been executed incorporating requirements and standards as set forth in this Agreement.

2. **Schedule.** The Services will be undertaken in a manner that ensures the Project is completed timely and efficiently in accordance with the Project.

3. **Consultant's Work.**

3.1 Standard. Consultant must perform Services in accordance with the standards of due diligence, care, and quality prevailing among consultants having substantial experience with the successful furnishing of Services for projects that are equivalent in size, scope, quality, and other criteria under the Project and identified in this Agreement.

3.2 Licensing. Consultant warrants that:

- a. Consultant and its Subconsultants or Subcontractors will hold all appropriate and required licenses, registrations and other approvals necessary for the lawful furnishing of Services ("Approvals"); and
- b. Neither Consultant nor any Subconsultant or Subcontractor has been debarred or otherwise legally excluded from contracting with any federal, state, or local governmental entity ("Debarment").
 - (1) City is under no obligation to ascertain or confirm the existence or issuance of any Approvals or Debarments, or to examine Consultant's contracting ability.
 - (2) Consultant must notify City immediately if any Approvals or Debarment changes during the Agreement's duration. The failure of the Consultant to notify City as required will constitute a material default under the Agreement.

3.3 Compliance.

- a. Services will be furnished in compliance with applicable federal, state, county and local statutes, rules, regulations, ordinances, building codes, life safety codes, and other standards and criteria designated by City.
- b. Consultant must not discriminate against any employee or applicant for employment on the basis of race, color, religion, sex, national origin, age, marital status, sexual orientation, gender identity or expression, genetic characteristics, familial status, U.S. military veteran status or any disability. Consultant will require any Sub-contractor to be bound to the same requirements as stated within this section. Consultant, and on behalf of any subcontractors, warrants compliance with this section.

3.4 Coordination; Interaction.

- a. For projects that the City believes requires the coordination of various professional services, Consultant will work in close consultation with City to proactively interact with

any other professionals retained by City on the Project ("Coordinating Project Professionals").

- b. Consultant will meet to review the Project, Schedule and in-progress work with Coordinating Project Professionals and City as often and for durations as City reasonably considers necessary in order to ensure the timely work delivery and Project completion.
- c. For projects not involving Coordinating Project Professionals, Consultant will proactively interact with any other contractors when directed by City to obtain or disseminate timely information for the proper execution of the Project.

3.5 Work Product.

- a. Ownership. Upon receipt of payment for Services furnished, Consultant grants to City, and will cause its Subconsultants or Subcontractors to grant to the City, the exclusive ownership of and all copyrights, if any, to evaluations, reports, drawings, specifications, project manuals, surveys, estimates, reviews, minutes, all "architectural work" as defined in the United States Copyright Act, 17 U.S.C § 101, *et seq.*, and other intellectual work product as may be applicable ("Work Product").
 - (1) This grant is effective whether the Work Product is on paper (e.g., a "hard copy"), in electronic format, or in some other form.
 - (2) Consultant warrants, and agrees to indemnify, hold harmless and defend City for, from and against any claim that any Work Product infringes on third-party proprietary interests.
- b. Delivery. Consultant will deliver to City copies of the preliminary and completed Work Product promptly as they are prepared.
- c. City Use.
 - (1) City may reuse the Work Product at its sole discretion.
 - (2) In the event the Work Product is used for another project without further consultations with Consultant, the City agrees to indemnify and hold Consultant harmless from any claim arising out of the Work Product.
 - (3) In such case, City will also remove any seal and title block from the Work Product.

4. **Compensation for the Project.**

- 4.1 Compensation. Consultant's compensation for the Project, including those furnished by its Subconsultants or Subcontractors will not exceed \$150,456.00 as specifically detailed in **Exhibit D** ("Compensation").
- 4.2 Change in Scope of Project. The Compensation may be equitably adjusted if the originally contemplated Scope as outlined in the Project is significantly modified.
 - a. Adjustments to Compensation require a written amendment to this Agreement and may require City Council approval.
 - b. Additional services which are outside the Scope of the Project contained in this Agreement may not be performed by the Consultant without prior written authorization from the City.
 - c. Notwithstanding the incorporation of the Exhibits to this Agreement by reference, should any conflict arise between the provisions of this Agreement and the provisions found in the Exhibits and accompanying attachments, the provisions of this Agreement shall take priority and govern the conduct of the parties.
- 4.3 Allowances. An "Allowance" may be identified in **Exhibit D** only for work that is required by the Scope and the value of which cannot reasonably be quantified at the time of this Agreement.

- a. As stated in Sec. 4.1 above, the Compensation must incorporate all Allowance amounts identified in **Exhibit D** and any unused allowance at the completion of the Project will remain with City.
- b. Consultant may not add any mark-up for work identified as an Allowance and which is to be performed by a Subconsultant.
- c. Consultant will not use any portion of an Allowance without prior written authorization from the City.
- d. Examples of Allowance items include, but are not limited to, subsurface pothole investigations, survey, geotechnical investigations, public participation, radio path studies and material testing.

4.4 Expenses. City will reimburse Consultant for certain out-of-pocket expenses necessarily incurred by Consultant in connection with this Agreement, without mark-up (the "Reimbursable Expenses"), including, but not limited to, document reproduction, materials for book preparation, postage, courier and overnight delivery costs incurred with Federal Express or similar carriers, travel and car mileage, subject to the following:

- a. Mileage, airfare, lodging and other travel expenses will be reimbursable only to the extent these would, if incurred, be reimbursed to City of Glendale personnel under its policies and procedures for business travel expense reimbursement made available to Consultant for review prior to the Agreement's execution, and which policies and procedures will be furnished to Consultant;
- b. The Reimbursable Expenses in this section are approved in advance by City in writing; and
- c. The total of all Reimbursable Expenses paid to Consultant in connection with this Agreement will not exceed the "not to exceed" amount identified for Reimbursable Services in the Compensation.

5. **Billings and Payment.**

5.1 Applications.

- a. Consultant will submit monthly invoices (each, a "Payment Application") to City's Project Manager and City will remit payments based upon the Payment Application as stated below.
- b. The period covered by each Payment Application will be one calendar month ending on the last day of the month.

5.2 Payment.

- a. After a full and complete Payment Application is received, City will process and remit payment within 30 days.
- b. Payment may be subject to or conditioned upon City's receipt of:
 - (1) Completed work generated by Consultant and its Subconsultants and Subcontractors; and
 - (2) Unconditional waivers and releases on final payment from all Subconsultants and Subcontractors as City may reasonably request to assure the Project will be free of claims arising from required performances under this Agreement.

5.3 Review and Withholding. City's Project Manager will timely review and certify Payment Applications.

- a. If the Payment Application is rejected, the Project Manager will issue a written listing of the items not approved for payment.

- b. City may withhold an amount sufficient to pay expenses that City reasonably expects to incur in correcting the deficiency or deficiencies rejected for payment.

6. Termination.

6.1 For Convenience. City may terminate this Agreement for convenience, without cause, by delivering a written termination notice stating the effective termination date, which may not be less than 15 days following the date of delivery.

- a. Consultant will be equitably compensated for Services furnished prior to receipt of the termination notice and for reasonable costs incurred.
- b. Consultant will also be similarly compensated for any approved effort expended, and approved costs incurred, that are directly associated with Project closeout and delivery of the required items to the City.

6.2 For Cause. City may terminate this Agreement for cause if Consultant fails to cure any breach of this Agreement within seven days after receipt of written notice specifying the breach.

- a. Consultant will not be entitled to further payment until after City has determined its damages. If City's damages resulting from the breach, as determined by City, are less than the equitable amount due but not paid Consultant for Services furnished, City will pay the amount due to Consultant, less City's damages, in accordance with the provision of Sec. 5.
- b. If City's direct damages exceed amounts otherwise due to Consultant, Consultant must pay the difference to City immediately upon demand; however, Consultant will not be subject to consequential damages more than \$1,000,000 or the amount of this Agreement, whichever is greater.

7. **Conflict.** Consultant acknowledges this Agreement is subject to A.R.S. § 38-511, which allows for cancellation of this Agreement in the event any person who is significantly involved in initiating, negotiating, securing, drafting, or creating the Agreement on City's behalf is also an employee, agent, or consultant of any other party to this Agreement.

8. **Insurance.** For the duration of the term of this Agreement, Consultant shall procure and maintain insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of all tasks or work necessary to complete the Project as herein defined. Such insurance shall cover Consultant, its agent(s), representative(s), employee(s) and any subcontractors.

8.1 **Minimum Scope and Limit of Insurance.** Coverage must be at least as broad as:

- a. Commercial General Liability (CGL): Insurance Services Office Form CG 00 01, including products and completed operations, with limits of no less than **\$1,000,000** per occurrence for bodily injury, personal injury, and property damage. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
- b. Automobile Liability: Insurance Services Office Form Number CA 0001 covering Code 1 (any auto), with limits no less than **\$1,000,000** per accident for bodily injury and property damage.
- c. Professional Liability. Consultant must maintain a Professional Liability insurance covering errors and omissions arising out of the work or services performed by Consultant, or anyone employed by Consultant, or anyone for whose acts, mistakes, errors and omissions Consultant is legally liability, with a liability insurance limit of \$1,000,000 for each claim and a \$2,000,000 annual aggregate limit.
- d. Worker's Compensation: Insurance as required by the State of Arizona, with Statutory Limits, and Employers' Liability insurance with a limit of no less than **\$1,000,000** per accident for bodily injury or disease.

8.2 Indemnification.

- a. To the fullest extent permitted by law, Consultant must defend, indemnify, and hold harmless City and its elected officials, officers, employees and agents (each, an "Indemnified Party," collectively, the "Indemnified Parties") for, from, and against any and all claims, demands, actions, damages, judgments, settlements, personal injury (including sickness, disease, death, and bodily harm), property damage (including loss of use), infringement, governmental action and all other losses and expenses, including attorneys' fees and litigation expenses (each, a "Demand or Expense" collectively "Demands or Expenses") asserted by a third-party (i.e. a person or entity other than City or Consultant) and that arises out of or results from the breach of this Agreement by the Consultant or the Consultant's negligent actions, errors or omissions (including any Subconsultant or Subcontractor or other person or firm employed by Consultant), whether sustained before or after completion of the Project.
- b. This indemnity and hold harmless provision applies even if a Demand or Expense is in part due to the Indemnified Party's negligence or breach of a responsibility under this Agreement, but in that event, Consultant will be liable only to the extent the Demand or Expense results from the negligence or breach of a responsibility of Consultant or of any person or entity for whom Consultant is responsible.
- c. Consultant is not required to indemnify any Indemnified Parties for, from, or against any Demand or Expense resulting from the Indemnified Party's sole negligence or other fault solely attributable to the Indemnified Party.

8.3 **Other Insurance Provisions.** The insurance policies required by the Section above must contain, or be endorsed to contain the following insurance provisions:

- a. **The City, its officers, officials, employees and volunteers are to be covered as additional insureds** of the CGL and automobile policies for any liability arising from or in connection with the performance of all tasks or work necessary to complete the Project as herein defined. Such liability may arise, but is not limited to, liability for materials, parts or equipment furnished in connection with any tasks, or work performed by Consultant or on its behalf and for liability arising from automobiles owned, leased, hired or borrowed on behalf of the Consultant. General liability coverage can be provided in the form of an endorsement to the Consultant's existing insurance policies, provided such endorsement is at least as broad as ISO Form CG 20 10, 11 85 or both CG 20 10 and CG 23 37, if later revisions are used.
- b. For any claims related to this Project, the **Consultant's insurance coverage shall be primary insurance** with respect to the City, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees or volunteers shall be in excess of the Consultant's insurance and shall not contribute with it.
- c. Each insurance policy required by this Section shall provide that coverage shall not be canceled, except after providing notice to the City.

8.4 **Acceptability of Insurers.** Insurance is to be placed with insurers with a current A.M. Best rating of no less than A: VII, unless the Consultant has obtained prior approval from the City stating that a non-conforming insurer is acceptable to the City.

8.5 **Waiver of Subrogation.** **Consultant hereby agrees to waive its rights of subrogation which any insurer may acquire** from Consultant by virtue of the payment of any loss. Consultant agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation Policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Consultant, its employees, agent(s) and subcontractor(s).

8.6 **Verification of Coverage.** Within 15 days of the Effective Date of this Agreement, Consultant shall furnish the City with original certificates and amendatory endorsements, or copies of any applicable insurance language making the coverage required by this Agreement effective. All certificates and endorsements must be received and approved by the City before work commences. Failure to obtain, submit or secure the City's approval of the required insurance policies, certificates or endorsements prior to the City's agreement that work may commence shall not waive the Consultant's obligations to obtain and verify insurance coverage as otherwise provided in this Section. The City reserves the right to require complete, certified copies of all required insurance policies, including any endorsements or amendments, required by this Agreement at any time during the Term stated herein.

Consultant's failure to obtain, submit or secure the City's approval of the required insurance policies, certificates or endorsements shall not be considered a Force Majeure or defense for any failure by the Consultant to comply with the terms and conditions of the Agreement, including any schedule for performance or completion of the Project.

8.7 **Subcontractors.** Consultant shall require and shall verify that all subcontractors maintain insurance meeting all requirements of this Agreement.

8.8 **Special Risk or Circumstances.** The City reserves the right to modify these insurance requirements, including any limits of coverage, based on the nature of the risk, prior experience, insurer, coverage or other circumstances unique to the Consultant, the Project or the insurer.

9. **E-verify, Records and Audits.** To the extent applicable under A.R.S. § 41-4401, the Consultant warrant their compliance and that of its subconsultants with all federal immigration laws and regulations that relate to their employees and compliance with the E-verify requirements under A.R.S. § 23-214(A). The Consultant or subconsultant's breach of this warranty shall be deemed a material breach of the Agreement and may result in the termination of the Agreement by the City under the terms of this Agreement. The City retains the legal right to randomly inspect the papers and records of the other party to ensure that the other party is complying with the above-mentioned warranty. The Consultant and subconsultant warrant to keep their respective papers and records open for random inspection during normal business hours by the other party. The parties shall cooperate with the City's random inspections, including granting the inspecting party entry rights onto their respective properties to perform the random inspections and waiving their respective rights to keep such papers and records confidential.

10. **No Boycott of Israel.** To the extent A.R.S § 35-393 through § 35-393.03 are applicable, the parties hereby certify that they are not currently engaged in, and agree for the duration of the Agreement to not engage in, a boycott of goods or services from Israel, as that term is defined in A.R.S § 35-393.

11. **Attestation of PCI Compliance.** When applicable, the Consultant will provide the City annually with a Payment Card Industry Data Security Standard (PCI DSS) attestation of compliance certificate signed by an officer of Consultant with oversight responsibility.

12. **Notices.**

12.1 A notice, request or other communication that is required or permitted under this Agreement (each a "Notice") will be effective only if:

- a. The Notice is in writing; and
- b. Delivered in person or by overnight courier service (delivery charges prepaid), certified or registered mail (return receipt requested).
- c. Notice will be deemed to have been delivered to the person to whom it is addressed as of the date of receipt, if:
 - (1) Received on a business day before 5:00 p.m. at the address for Notices identified for the Party in this Agreement by U.S. Mail, hand delivery, or overnight courier service; or
 - (2) As of the next business day after receipt, if received after 5:00 p.m.

- d. The burden of proof of the place and time of delivery is upon the Party giving the Notice.
- e. Digitalized signatures and copies of signatures will have the same effect as original signatures.

12.2 Representatives.

- a. Consultant. Consultant's representative (the "Consultant's Representative") authorized to act on Consultant's behalf with respect to the Project, and his or her address for Notice delivery is:

Mark Gavan
 Gaban & Barker, Inc.
 3030 North Central Avenue, Suite 700
 Phoenix, Arizona 85012

- b. City. City's representative ("City's Representative") authorized to act on City's behalf, and his or her address for Notice delivery is:

City of Glendale
 c/o Abdul Rashid
 5850 West Glendale Avenue, Suite 315
 Glendale, Arizona 85301

With required copy to:

City Manager
 City of Glendale
 5850 West Glendale Avenue
 Glendale, Arizona 85301

City Attorney
 City of Glendale
 5850 West Glendale Avenue
 Glendale, Arizona 85301

- c. Concurrent Notices.
 - (1) All notices to City's representative must be given concurrently to City Manager and City Attorney.
 - (2) A notice will not be deemed to have been received by City's representative until the time that it has also been received by the City Manager and the City Attorney.
 - (3) City may appoint one or more designees for the purpose of receiving notice by delivery of a written notice to Consultant identifying the designee(s) and their respective addresses for notices.
- d. Changes. Consultant or City may change its representative or information on Notice, by giving Notice of the change in accordance with this section at least ten days prior to the change.

13. **Financing Assignment.** City may assign this Agreement to any City-affiliated entity, including a non-profit corporation or other entity whose primary purpose is to own or manage the Project.

14. **Entire Agreement; Survival; Counterparts; Signatures.**

14.1 Integration. This Agreement contains, except as stated below, the entire agreement between City and Consultant and supersedes all prior conversations and negotiations between the parties regarding the Project or this Agreement.

- a. Neither Party has made any representations, warranties or agreements as to any matters concerning the Agreement's subject matter.
- b. Representations, statements, conditions, or warranties not contained in this Agreement will not be binding on the parties.

- c. Inconsistencies between the solicitation, any addenda attached to the solicitation, the response or any excerpts attached as **Exhibit A**, and this Agreement, will be resolved by the terms and conditions stated in this Agreement.

14.2 Interpretation.

- a. The parties fairly negotiated the Agreement's provisions to the extent they believed necessary and with the legal representation they deemed appropriate.
- b. The parties are of equal bargaining position and this Agreement must be construed equally between the parties without consideration of which of the parties may have drafted this Agreement.
- c. The Agreement will be interpreted in accordance with the laws of the State of Arizona.

14.3 Survival. Except as specifically provided otherwise in this Agreement, each warranty, representation, indemnification and hold harmless provision, insurance requirement, and every other right, remedy and responsibility of a Party, will survive completion of the Project, or the earlier termination of this Agreement.

14.4 Amendment. No amendment to this Agreement will be binding unless in writing and executed by the parties. Electronic signature blocks do not constitute execution for purposes of this Agreement. Any amendment may be subject to City Council approval.

14.5 Remedies. All rights and remedies provided in this Agreement are cumulative and the exercise of any one or more right or remedy will not affect any other rights or remedies under this Agreement or applicable law.

14.6 Severability. If any provision of this Agreement is voided or found unenforceable, that determination will not affect the validity of the other provisions, and the voided or unenforceable provision will be reformed to conform with applicable law.

14.7 Counterparts. This Agreement may be executed in counterparts, and all counterparts will together comprise one instrument.

15. Term.

15.1 Renewals. The term of this Agreement commences upon the effective date and continues for a one (1) year initial period. The City may, at its option and with the approval of the Consultant, extend the term of this Agreement an additional one (1) year, renewable on an annual basis. Consultant will be notified in writing by the City of its intent to extend the Agreement period at least thirty (30) calendar days prior to the expiration of the original or any renewal Agreement period. Price adjustments will only be reviewed during the Agreement renewal period and will be a determining factor for any renewal. There are no automatic renewals of this Agreement.

15.2 Extension for Procurement Process. Upon the expiration of the Term of this Agreement, including the initial term and any renewals, at the City's sole discretion, this Agreement may be extended on a month-to-month basis for a maximum of six (6) months to allow for the City to complete its procurement process to select a vendor to provide the services/materials similar to those provided under this Agreement. The City will notify the Contractor in writing of its intent to extend the Agreement at least thirty (30) calendar days prior to the expiration of the Term. Any extension provided under this subsection will continue under the same terms and conditions as in effect immediately prior to the expiration of the then-current term.

16. Dispute Resolution. Any controversy or claim arising out of or relating to this contract, or the breach thereof, shall be settled by arbitration administered according to the American Arbitration Association's Commercial Arbitration Rules, and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof.

17. Exhibits. The following exhibits, with reference to the term in which they are first referenced, are incorporated by this reference.

EXHIBIT A
Professional Services Agreement
PROJECT

See attached

EXHIBIT A
Professional Services Agreement
Glenn Drive Storm Drain Study
59th Avenue to 52nd Avenue
Project No. _____

DESCRIPTION OF PROJECT:

This project is a study to refine the concept design and cost estimate for a new storm drain in Glenn Drive that will extend from the existing 108-inch ADOT storm drain in 59th Avenue and run east to 52nd Avenue. Glenn Drive is located on the upstream end of downtown Glendale, one block north of Glendale Avenue. Under existing conditions, the downtown area including City Hall is susceptible to flooding from runoff that that flows from the north over Glenn Drive.

The proposed Glenn Drive storm drain is one of the recommended drainage improvement elements contained in the *“Glendale Area Stormwater Management Plan – Final Recommended Plan Report”* prepared by Kimley-Horn and Associates Inc. in 2011. The Recommended Plan calls for a 78-inch storm drain to be constructed between 59th and 52nd Avenues at an estimated cost of \$4.3 million. The plan was based on the updated Glendale Area Stormwater Management Plan which was developed using a HEC-1 model of the 10-year storm. With this new study, a two-dimensional FLO-2D model will be prepared to better predict the 10-year flows reaching Glenn Drive. The FLO-2D model will incorporate the entire upstream watershed area that contributes flow to downtown Glendale and will incorporate the existing drainage infrastructure (i.e. storm drains, basins, etc.) that lie upstream of Glenn Drive. It is anticipated that utilizing the FLO-2D model for the design of the storm drain will result in lower design flows with a corresponding reduction in pipe size. Moreover, the FLO-2D model will allow us to better predict the upstream drainage patterns and inflow locations.

In addition to updating the hydrologic and hydraulic modeling, this study will include a preliminary design for the proposed storm drain, including plan and profile drawings, location and approximate sizing of the storm drain inlets, and quantity/cost estimates. From inspection of existing utilities, it appears that it will be challenging to install the storm drain in Glenn Drive. Therefore, the study will also include an evaluation of alternative storm drain alignments.

EXHIBIT B
Professional Services Agreement

SCOPE OF WORK

See attached

EXHIBIT B
Professional Services Agreement
CITY OF GLENDALE
Glenn Drive Storm Drain Study
59th Avenue to 52nd Avenue
Project No. _____

SCOPE OF WORK

The following is the scope of work for this project:

A. General project administration services may include:

- Coordinating with the City Project Team during the design of the project.
- Attending virtual project meetings as necessary to maintain the project budget and schedule; chairing periodic regular virtual meetings and any additional meetings as requested by the City; setting agendas, setting up virtual meeting and preparing and distributing meeting minutes. Meetings under basic services may include:
 - a) Virtual meetings with City staff and management.
 - b) Field visits with City staff.
 - c) Meetings with oversight committees (i.e. City Management, City Council, Planning, etc.).
- Coordinating with private, public and City utilities (i.e., Information Technology Department, Water Services Department) regarding standard technology and utility issues and incorporating pertinent information in the study.
- Preparing and maintaining a project schedule after meeting with the designated City project manager (referred to as “Project Manager”) to determine appropriate submittal deadlines and to coordinate project submissions.
- Submitting a written monthly Design and Progress Report to the City during the entire period of design.
- Submitting a written monthly progress report to the City and Project Team during the entire period of the project. Also, the Consultant will be required to submit a monthly project schedule update and status report, as well as a quarterly project cash flow schedule for both design and construction phases. This information will be submitted to City Engineering Administration for the entire period of the project, through both design and construction.
- Project Schedule: The Consultant shall prepare a significant event calendar within fourteen (14) days of the Notice to Proceed (NTP). The initial schedule should show the original start date with initial completion date as a reference. One copy of the original overall schedule with original timeline and data dates shall be submitted at the project kick-off meeting. Additionally, minimum general time frames for project milestones shall be provided. The Consultant shall update the schedule monthly to keep it current showing comparison with the Baseline/Target schedule. The updated schedule report shall be submitted with the monthly invoice.
- Invoices: The Consultant shall submit a projection of monthly project billings with the fee proposal. The projected billing will be consistent with the project tasks, the project schedule, and the fee proposal. The City will provide the format for invoices. Projected invoices, with progress and status reports will be delivered to the City’s Project Manager no later than the 25th day of the month. The invoices will be consistent with the project tasks, project schedule, fee proposal, and projected billings. The invoice will identify the contract number and include the amount of each work task and man-hour level of effort and consultant service identified in the approved fee proposal. The percent complete shall be determined the project schedule, tasks, and fee proposal per tasks. The total invoice submitted shall be less than or equal to the report that details the task percent complete with the associated cost. The invoice will show the amounts previously billed, the amount due for the current period, the project balance and the percent complete per tasks.

The Consultant shall submit one hard copy invoice to the City Project Manager, City of Glendale Engineering Department, 5850 West Glendale Avenue, Glendale, Arizona 85301.

- **Cash Flow:** The cash flow schedule will provide information to the City regarding future funds needed to complete the project. It is the responsibility of the Consultant to submit the project life cycle cash flow spreadsheet on a quarterly basis. Non-response to this requirement could delay payments to the Consultant. The Consultant will have life cycle design and construction administration responsibility for the project.

The Consultant will collect or estimate the cash flow information from all the parties involved in the project (e.g., design consultants, engineers, construction contractors, etc.) and will combine this information using the Excel four (4) page workbook provided to the Consultant by the city. The Consultant will need to obtain the cash flow information from the Contractor and coordinate this information into the overall cash flow information. The Consultant will complete the applicable four (4)-page worksheet and send it electronically to Gloria Olaya (golaya@glendaleaz.com) with the Engineering Department. To request an electronic form, address requests to the above. To request by telephone, call 623-930-3630.

B. Task 1 – Glenn Drive Storm Drain Study

This task is to conduct a study to refine the design for the proposed Glenn Drive storm drain. The study will include development of a FLO-2D rainfall-runoff model to better predict the flood flows and development of preliminary plans for the proposed storm drain. It will also include an assessment of alternative alignments for the proposed storm drain. The following are the individual tasks associated with Task 1.

- **Data Collection** – The Consultant will collect and review pertinent data from the City of Glendale, the Flood Control District of Maricopa County, ADOT and others. Data to be collected will include as-built plans, utility maps, existing storm drain maps, quarter section maps, water and sewer maps, rainfall data, topographic maps, existing drainage reports, and other pertinent information. A summary of data collected will be included in the preliminary storm drain report.
- **FLO-2D/SWMM Model Development** - A new two-dimensional FLO-2D/SWMM hydrologic model will be prepared to develop the design flows for the proposed Glenn Drive storm drain between 59th Avenue and 52nd Avenue. The Kimley-Horn recommended plan is based on a city-wide HEC-1 model that would not be suitable for the design of the proposed storm drain. Instead, a new FLO-2D/SWMM model will be prepared to encompass the entire upstream contributing drainage area by modeling the area bound by 61st Avenue to the west, Mountain View Road to the north and 35th Avenue to the east. In order to properly define the downstream tailwater in the existing 108-inch ADOT storm drain in 59th Avenue, the proposed FLO-2D model will extend south to Maryland Avenue in order to encompass the entire contributing drainage area to the existing storm drain. Therefore, the total FLO-2D model area is approximately 9.5 square miles. The model will be prepared as follows:
 - a. **Grid Size** – The grid size for the two-dimensional model shall be 20 feet. From previous experience on urban modeling this was found to provide an acceptable level of detail while also keeping the number of grids to a manageable 670,000 grids.
 - b. **Average Grid Elevation** – The topographic mapping that will be used for this model will be obtained from the United States Geologic Survey (USGS). The USGS in collaboration with Maricopa and Pinal County have developed 1-foot pixel resolution bare earth LiDAR data for the majority of the Phoenix Metro Area. Utilizing this readily available DEM data ([https://prd-tnm.s3.amazonaws.com/LidarExplorer/index.html#/ \[prd-tnm.s3.amazonaws.com\]](https://prd-tnm.s3.amazonaws.com/LidarExplorer/index.html#/ [prd-tnm.s3.amazonaws.com])), the average grid elevations will be calculated utilizing the FLO-2D QGIS plug-in tool.
 - c. **Rainfall** – Both the 10-year and 100-year, 6-hour storm events will be modeled with the FLO-2D model. The NOAA Atlas 14 rainfall values will be used and the Flood Control District of Maricopa County “Pattern 1” distribution will be incorporated for the 6-hour storm events.
 - d. **Rainfall Losses** – The Green & Ampt (G&A) loss method will be applied within the INFIL.DAT input file. The FLO-2D QGIS plug-in tool will be used to compute the spatially varied G&A input parameters. The soil input parameters will be based on the NRCS Soil Survey that will be obtained from the Flood Control District of Maricopa County, while the land use input parameters will be based on the Land Surface Feature Characterization shapefile.
 - e. **Land Surface Feature Characterization (LSFC)** – The LSFC shapefile is a major component of the data input files for the FLO-2D model in that it is used to determine the land-use covers for the INFIL.DAT file as well as the roughness coefficients in the MANNINGS_N.DAT file. The LSFC has already been developed for the area east of 55th Avenue as

part of the FLO-2D modeling effort that Stantec is developing for the Bethany Home Road and 51st Avenue Drainage Improvements. The remaining 2 square miles, between 61st/55th Avenue and Grand Avenue/Mountain View Road will be digitized by Gavan & Barker utilizing the Flood Control District of Maricopa County specifications for the establishment of the LSFC file. However, it will be assumed that the permeable surfaces will either be identified as bare ground or low level urban vegetation in order to simplify the development of the land characterization data.

- f. *Spatially Varied n-Values (MANNINGS_N.DAT)* – The FLO-2D QGIS plug-in tool will be used to assign the average surfaced roughness parameter (Manning’s n-value) to each model grid cell based on the land cover type in the LSFC.
- g. *Obstructions to Storage (ARF.DAT)* – The obstructions to storage will be defined as area reduction factors (ARF) in the ARF.DAT file. The FLO-2D QGIS plug-in tool will be used to assign the area reduction factors based on the roof print layer that will be obtained from the Flood Control District of Maricopa County.
- h. *Obstructions to Flow (LEVEE.DAT)* – The obstructions to flow, which represent impediments to surface flow conveyance created by walls, will be defined in the LEVEE.DAT file. Only walls that have a significant impact on the flow distribution will be included in the analysis. The FLO-2D QGIS plug-in tool will be used to generate the LEVEE.DAT with the crest elevation estimated by adding 6-feet (approximate height of a residential block wall) to the underlying ground DEM.
- i. *Culverts/Hydraulic Structures (HYSTRUC.DAT)* – All culverts, 36 inches in diameter or larger will be included in the model. Culverts whose diameter is between 24- and 36-inches may be included in the model if their conveyance represents a significant factor in determining the flow reaching Glenn Drive. Culverts that are added will be modeled with the FLO-2D generalized culvert equation.
- j. *Storm Drain Data (SWMM.inp, SWMMFLO.DAT & SWMMOUTF.DAT)* – A SWMM ready GIS database of the existing storm drains will be created from the City of Glendale storm drain geodatabase, as-built plans and field measurements. This will include the existing storm drains listed below. The data will include the storm drains and sizes, the manholes and invert elevations at manholes, the inlets including type and size, and the connector pipes. These storm drains will then be modeled using the SWMM storm drain feature in FLO-2D with inflows dynamically applied through existing inlets. The inflow peak discharge calculated by FLO-2D for each inlet shall be reviewed for reasonableness. Adjustments will be made to the grid elevation assignments and/or the n-value assignments to achieve reasonable inflow hydrographs for each of the storm drain inlets. The FLO-2D QGIS plug-in tool will be used to convert the GIS database into the SWMM input files. At a minimum the following storm drains in the contributing watershed area will be added to the FLO-2D model:
 - i. Grand Avenue Storm Drain – Maryland Avenue to 61st Avenue
 - ii. Glendale Avenue Storm Drain – 51st Avenue to Grand Avenue
 - iii. Orangewood/59th Avenue Storm Drain – Northern Avenue to Orangewood Avenue to 61st Avenue
 - iv. Northern Avenue Storm Drain – 47th Avenue to 61st Avenue
 - v. Peoria Avenue Storm Drain – 47th Avenue to 61st Avenue
 - vi. 43rd Avenue Storm Drian – Arizona Canal to Maryland Avenue
 - vii. 47th Avenue Storm Drian – Orangewood Avenue to Maryland Avenue
 - viii. 49th Avenue Storm Drain – Glendale Avenue to Maryland Avenue
- k. *Hydraulic Analysis Check* - In conjunction with the FLO-2D modeling, standalone hydraulic calculations will be prepared to determine the capacity of select channels and streets. The analysis will ensure that runoff intended to flow into the detention basins is accurately depicted in the FLO-2D models. The purpose of this analysis is for general FLO-2D model verification. This analysis is not intended to be comprehensive, but simply a check of FLO-2D results. Hydraulic analyses shall be limited to normal depth calculations for open channels and streets.
- l. *Numerical Stability* - Inappropriate n-value assignments and/or grid elevation assignments may result in extreme numbers of time step decrements due to numerical instability within the FLO-2D model. This can result in unreasonably high velocities causing unreasonably high maximum discharges and long model run times. The FLO-2D model will be reviewed and appropriate adjustments will be made to eliminate the unreasonably high maximum discharges/velocities.
- m. *Floodplain Cross Sections (FPXSEC.DAT)* – Floodplain cross section locations will be added throughout the upstream watershed at major flow concentrations. However, the primary use of floodplain cross section locations will immediately upstream of proposed inlet locations along Glenn Drive. The peak discharges from the cross sections will be used to approximate the size of the new storm drain inlets.

- Field Visits/Measurements – The Consultant will conduct site visits to obtain all needed photographs, verify FLO-2D drainage patterns and collect field data on existing drainage infrastructure.
- Assess Alternative Storm Drain Alignments – The storm drain plan and profile drawings in the Glendale Area Stormwater Management Plan Preliminary indicate that there are sanitary sewer conflicts in the proposed Glenn Drive alignment. Therefore, the study will include an assessment of alternative alignments in Palmaire Drive and/or Myrtle Avenue to determine if there are alternative alignments that would involve less disruption to the existing utilities. The analysis will include exhibits of each alternative alignment in order to document the recommended alignment.
- Preliminary Storm Drain Plan and Profile Drawings – Plan and profile drawings of the proposed storm drain will be prepared for the recommend alignment. These drawings will include existing utilities, existing ROW, floodwater inflows derived from the FLO-2D model, the proposed storm drain alignment, pipe sizes, pipe profile, manhole locations, approximate location and sizes of storm drain inlets and itemization of removals and new construction required to install the proposed storm drain. The proposed storm drain will also be incorporated in the FLO-2D model to document its impact on surface runoff, including the reduction in the flood flows that reach the area of downtown Glendale.
- Budgetary Cost Estimate – An itemized budgetary cost estimate will be prepared for the proposed storm drain using recent bid results from other projects in the Phoenix Metro area.
- Report – The Consultant will prepare a report for the proposed Glenn Drive storm drain that includes a discussion of the data collection effort, ESGS LiDAR mapping, FLO-2D hydrologic/ hydraulic analysis, supporting calculations, alternative storm drain alignments, cost estimates, and exhibits/photographs. Report exhibits will include 1) FLO-2D output maps of Peak Discharge and Maximum Flow Depths, 2) Exhibits of each alternative alignment considered, 3) plan and profile drawings of the proposed storm drain, and 4) enlarged exhibits of the downtown area showing peak discharge and flow depths with and without the proposed storm drain. The City will review and comment on the preliminary report. The Consultant will address the comments by revising the report, as necessary, and providing a final report.
- SUBMITTALS

Preliminary Submittal – A preliminary report will be submitted to the City for review. The preliminary submittal will be made electronically in PDF format.

Final Submittal – Upon approval of the preliminary report, a final drainage report will be submitted which will include any revisions requested by the City. The final submittal will also be submitted electronically in PDF format.

C. Task 2 – Allowance for Extra Work:

This allowance is for extra work, as determined by the City, to provide additional studies and/or carry out additional work on the storm drain study. The Consultant shall not use any portion of this allowance without prior authorization from the City.

D. Task 3 – Allowance for Final Design:

This allowance is for the final design of the downstream portion of the storm drain which is needed to provide an outfall for the existing stormwater pump system that serves the City’s municipal complex on the south side of Glenn Drive. If an alternative alignment is chosen for the ultimate storm drain, this design allowance will be used to design a smaller diameter storm drain in Glenn Drive that will serve as an outfall for the pump system. The Consultant shall not use any portion of this allowance without prior authorization from the City.

EXHIBIT C
Professional Services Agreement

SCHEDULE

See attached

EXHIBIT C
Professional Services Agreement
CITY OF GLENDALE
Glenn Drive Storm Drain Study
59th Avenue to 52nd Avenue
Project No. _____

PROJECT SCHEDULE
(Calendar Days)

Activity	Duration
Design Completion	
Data Collection and Topo Mapping	14
FLO-2D/SWMM Model Development	120
Assess Alternative SD Alignments	21
Preliminary Storm Drain Plans	28
Preliminary Drainage Report	35
City Review	28
Final Drainage Report	21
Total Design Time	267

EXHIBIT D
Professional Services Agreement

COMPENSATION

METHOD AND AMOUNT OF COMPENSATION

Time and Materials not to exceed

NOT-TO-EXCEED AMOUNT

The total amount of compensation paid to Consultant for full completion of all work required by the Project during the entire term of the Project must not exceed \$150,456.

DETAILED PROJECT COMPENSATION

See attached.

FEE SCHEDULE/PROJECT ESTIMATING SHEET

Glenn Drive Storm Drain Study

59th Ave. to 52nd Ave.

Type of Work and Task	Senior Project Manager		Civil Engineer		Civil Designer		Total Direct Labor Fees		Direct Costs	Total Amount
	Hrs	156.00	Hrs	118.00	Hrs	98.00	Hrs	Dollars		
TASK 1 - STORM DRAIN STUDY										
Data Collection	4	624.00	20	2,360.00	4	392.00	28	3,376.00	-	\$ 3,376
FLO-2D/SWMM Model Development										
Grid Development	2	312.00	4	472.00	-	-	6	784.00	-	\$ 784
Average Grid Elevation	2	312.00	12	1,416.00	-	-	14	1,728.00	-	\$ 1,728
Rainfall	2	312.00	4	472.00	-	-	6	784.00	-	\$ 784
Rainfall Losses	2	312.00	10	1,180.00	-	-	12	1,492.00	-	\$ 1,492
Land Surface Characterization	4	624.00	20	2,360.00	64	6,272.00	88	9,256.00	-	\$ 9,256
Spatially Varied n-Values	2	312.00	6	708.00	-	-	8	1,020.00	-	\$ 1,020
Obstructions to Storage	2	312.00	24	2,832.00	-	-	26	3,144.00	-	\$ 3,144
Obstructions to Flow	2	312.00	20	2,360.00	48	4,704.00	70	7,376.00	-	\$ 7,376
Culverts/Hydraulic Structures	4	624.00	8	944.00	16	1,568.00	28	3,136.00	-	\$ 3,136
Storm Drain Data	8	1,248.00	56	6,608.00	80	7,840.00	144	15,696.00	-	\$ 15,696
Hydraulic Analysis Check	6	936.00	64	7,552.00	-	-	70	8,488.00	-	\$ 8,488
Numerical Stability	4	624.00	16	1,888.00	-	-	20	2,512.00	-	\$ 2,512
Floodplain Cross Sections	2	312.00	12	1,416.00	-	-	14	1,728.00	-	\$ 1,728
Field Visits/Measurements	4	624.00	16	1,888.00	4	392.00	24	2,904.00	-	\$ 2,904
Alternative Storm Drain Alignments	4	624.00	16	1,888.00	24	2,352.00	44	4,864.00	-	\$ 4,864
Preliminary Storm Drain Plans	6	936.00	12	1,416.00	48	4,704.00	66	7,056.00	-	\$ 7,056
Budgetary Cost Estimate	2	312.00	6	708.00	12	1,176.00	20	2,196.00	-	\$ 2,196
Preliminary Drainage Report	10	1,560.00	64	7,552.00	12	1,176.00	86	10,288.00	-	\$ 10,288
Final Drainage Report	4	624.00	12	1,416.00	6	588.00	22	2,628.00	-	\$ 2,628
Subtotal - TASK 1										
ALLOWANCES										
Allowance for Extra Work - Task 2								10,000.00		\$ 10,000
Allowance for Final Design - Task 3								50,000.00		\$ 50,000
Total	76	11,856.00	402	47,436.00	318	31,164.00	796	150,456.00	-	\$ 150,456