EXHIBIT 1

AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES FOR THE EAST FORK OF LITTLE BLUE WATERSHED STORMWATER IMPROVEMENT PROJECT (SOLE SOURCE)

THIS AGREEMENT made and entered into this <u>day of</u>, 20, by and between the City of Lee's Summit, Missouri (hereinafter "City"), and Allgeier Martin and Associates, Inc. (hereinafter "Engineer").

WITNESSETH:

WHEREAS, City intends to have engineering services for <u>East Fork of Little Blue</u> <u>Watershed Stormwater Improvement Project</u> (hereinafter "Project"); and

WHEREAS, Engineer has submitted a proposal for the Project and an estimate of engineering costs to perform the Project; and

WHEREAS, the City Manager is authorized and empowered by City to execute contracts providing for professional engineering services; and

WHEREAS, City desires to enter into an agreement with Engineer to perform the Project; and

WHEREAS, Engineer represents that the firm is equipped, competent, and able to undertake such an assignment.

NOW THEREFORE, in consideration of the mutual covenants and considerations herein contained, **IT IS HEREBY AGREED** by the parties hereto as follows:

ARTICLE I SCOPE OF BASIC SERVICES TO BE PROVIDED BY ENGINEER

Engineer shall provide the following professional engineering services to City ("Basic Services"):

- 1.1 <u>General</u>
- 1.1.1 ENGINEER shall perform professional planning, design, preparation of easement descriptions for property acquisition, bidding, and limited construction phase services as hereinafter stated which include customary civil engineering services.
- 1.1.2 Coordinate the planning, design and construction of improvements for the project mentioned above with the City.
- 1.1.3 In general, the Project consists of the following:

Phase 1- Gather background information, develop practical alternatives, develop cost estimates, and present alternatives. Coordinate with the City to determine the recommended approach(es) to addressing the storm water flooding issues at locations 1-4. See Exhibit A (total of 13 pages).

Phase 2 - Design the recommended approaches and provide bidding and construction services. Phase 2 will be developed after the Phase 1 services are completed. There will be a modification to this agreement to establish a fee for services prior to the start of Phases 2.

1.2.1 Surveying

Topographic surveying to support the Alternatives Analysis and hydraulic model development. For the applicable project locations, the survey data will be tied to FEMA benchmarks for potential use in Phase 2 & 3 for Floodplain mapping and FEMA review.

1.2.1.1 Resident Notification Letter

Send a notification letter to the affected residents in the project area.

1.2.1.2 Water Entry Elevation Structure Survey

Define water entry elevations for habitable structures.

- 1611 SE 2nd Terrace (1 house, location 1)
- 533 & 537 Country Lane and 1327 6th Street (3 houses, location 2)
- 1804 & 1806 3rd Street (2 houses, location 3)
- 1706, 1710, & 1715 Boone Trail (3 houses, location 4)
- 1.2.1.3 High Water Marks

Any high water marks observed at the listed residential properties will be surveyed for use during model calibration and development. Historical high water elevations may also be surveyed after residential meetings if new data points are discovered from coordination with the residents. Due to the time since the most recent flood event, high water marks are anticipated to be staining or water lines along foundations.

1.2.1.4 Roadway Crossing Structure Survey

Define structure material, dimensions, low chord, piers, abutment walls, upstream and downstream flowlines, and other geometric information to support hydraulic model development. Provide a road centerline profile approximately 500 ft long centered at the channel to identify overtopping elevations. Provide a cross section 10 ft upstream and 10 ft downstream of the abutment toe of slope at each crossing.

- NE Langsford Rd at EFLB
- NE Todd George Rd at EFLB
- 1.2.1.5 East Fork Little Blue (Location 1)

Field Survey additional stream cross sections, between for use NE Todd George Rd and SE Winburn Trail, for use in the hydraulic model.

1.2.1.6 Subdivisions at locations 1-4 identified in Exhibit A

Locate and survey relevant storm system structures that are missing from, or have incomplete data in, the City's GIS database.

1.2.1.7 Horizontal and vertical control

The horizontal datum reference shall be NAD83.. Horizontal projection shall be State Plane Mercator, Missouri West Zone (feet). The vertical datum reference shall be NAVD88. The survey shall pick up any existing available FEMA reference control monuments in the project vicinity. Horizontal and vertical control datum references are per the Jackson County, Missouri FEMA Flood Insurance Study report dated January 20, 2017.

1.2.2 Model Development

1.2.2.1 Background Data Collection and Analysis

Collect and analyze available GIS, profile, H&H and other data in advance of field data collection. Data may include, but is not limited to contour and topo data, as-builts, rainfall data, gage data, historical storm event elevations, GIS data, and projection files with aerial photography (as available), survey, boundary and utility information, geotechnical information, City, County and other reports, complaint logs and other available background.

• Information on historical flood elevations at residential properties will be collected during the resident meetings (refer to the Public Engagement Section 4.0).

1.2.2.2 Resident Flood History

Allgeier Martin (AM) will coordinate with each affected resident, requesting any available information regarding flooding history on the resident's property (Refer to the Public Engagement section). AM will collect, review, and evaluate the available resident flood history information. The flood history information will be used during the hydraulic model calibration.

1.2.2.3 Hydrologic Data Development

AM will develop site hydrology, as appropriate for each location, to support the hydraulic evaluation and alternatives. Subbasins will be delineated and flow paths developed at critical points in the EFLB watershed. The NRCS Curve Number method will be used for abstractions, considering land use and soil type. For the overall EFLB watershed, a hydrologic model will be created in the Corps of Engineers HEC1 computer program and utilizing Huff's Quartile temporal distributions. Incidental storage caused by the Winburn Trail and NE Langsford culverts will be modeled. For the enclosed storm drain systems, the hydrologic models may be developed using either HEC1 or the EPA SWMM engine in the AutoCAD's Storm and Sanitary Analysis program, whichever will best represent the watershed for that location.

1.2.2.4 Hydraulic Data Development

1.2.2.4.1 Main stem of EFLB

AM will prepare an existing conditions hydraulic model using HEC-RAS hydraulic modeling software for the main stem of the EFLB. This model will be a starting point for solutions at locations 1 and 2.

• Duplicate Effective model – AM has already obtained the FEMA effective model for the EFLB. The vertical datum will be converted from NGVD29 to NAVD88 to create the Duplicate Effective model.

- Corrected Effective model -- This model will be developed from the Effective FEMA model, modified with available City GIS data and field survey data. Field survey data will include both the new data for this project and that obtained for the SE 5th Terrace project.
- 1.2.2.4.2 Enclosed systems

For the storm drain systems at locations 2, 3 and 4, the existing conditions hydraulic models will be developed using the EPA SWMM engine in the AutoCAD's Storm and Sanitary Analysis program. For location 4, incidental storage in the wooded area south of 4th Street will be modeled.

1.2.2.4.3 Model Calibration

Where possible, AM will use available rainfall data and high water marks for resident-reported flood dates to recreate storm events in the hydrologic models. The resulting runoff will be routed through the existing conditions models and used for calibration purposes.

1.2.2.4.4 Field Data Collection

AM will walk the project areas to verify drainage areas and storm system sizes, and to evaluate site conditions, potential right of way/easement needs, and potential conflicts with utilities, driveways, other property amenities.

• This site visit will coincide with the Resident surveys and on-line interviews, and any necessary individual on-site meetings (Refer to the Public Engagement Section 4.0).

1.2.3 Design Alternatives Analysis

The goal of the alternatives evaluation is to determine which alternatives are the most practical method to address the flooding issues at the individual project locations, and in the watershed as a whole.

1.2.3.1 Develop Practical Alternatives

AM will develop alternative design approaches for each project location and will work with the City to determine the most practical approaches based on cost, disturbance, constructability, and other considerations. Anticipated alternatives include the following, but others may be developed as well:

- Upsizing portions of the enclosed systems, including the addition of inlets.
- Rerouting existing enclosed systems or creating parallel systems.
- Addition of new detention or modification of existing detention basins.
- Addition of barrels, or complete culvert replacement, at Winburn Trail.
- Stream modifications to the main stem of EFLB to increase conveyance or storage.
- Floodproofing of structures.
- "Do Nothing" and "Buy-Out" options may be considered, where appropriate.
- Other alternatives and combinations as identified in the analysis process.

1.2.3.2 Alternatives Modeling

AM will evaluate the practical approaches using the appropriate software (HEC1, HEC-RAS, SWMM engine in AutoCAD SSA) at each project location to determine the effectiveness of the various alternatives at mitigation of flooding. Interactions between the various alternatives will be considered, including whether increasing conveyance capacity in the system will pass the flooding problems downstream.

1.2.3.3 Develop Schematic Costs

AM will develop schematic costs for each practical alternative.

1.2.3.4 Analyze Alternatives

AM will evaluate the advantages, opportunities, and challenges of each practical alternative and coordinate with the City to determine the most practical and cost-effective alternative for each site.

- This stage will include an Update Meeting with the City to discuss the various models and proposed options for feasibility.
- Results of the Update Meeting will determine which alternatives to refine.
- 1.2.3.5 Refining of Alternatives
 - Modeling will be refined for selected alternatives, as determined in the Update meeting.
 - Preparation of cost estimates and conceptual drawings.
- 1.2.3.6 Preliminary Engineering Report
 - 1.2.3.6.1 Draft Preliminary Engineering Report

AM will prepare a Draft Preliminary Engineering Report summarizing the various alternatives for each project location. The report will include cost estimates and conceptual drawings.

1.2.3.6.2 Presentation of Draft Preliminary Engineering Report

AM will present the Draft Preliminary Engineering Report to the City for comments, either in-person or via TEAMS meeting. A PDF copy of the draft report will be submitted to the City via email.

1.2.3.6.3 Incorporate Comments and Finalize Report

AM will incorporate City comments into the Preliminary Engineering Report and submit the final version to the City in PDF format via email.

1.2.3.7 Approve Approach

The City will evaluate the alternatives analysis and discuss any questions or concerns until they have reached a consensus on the approved approach. AM will be available to the City, as needed, to provide input in these discussions.

1.2.4 Public Engagement

AM will inform residents about the projects and coordinate directly with affected property owners as follows:

- 1.2.4.1 AM will send out notification letters and resident surveys requesting any information regarding flooding history on the resident's property.
- 1.2.4.2 AM will conduct on-line interviews with property owners via TEAMS meeting to determine flooding history on the resident's property, elevations, and if any high water marks are still visible that could be surveyed.
- 1.2.4.3 AM will also coordinate with property owners in-person and via phone and/or email, as needed.
- 1.2.4.4 AM will prepare meeting/communication summary notes and include them in an Appendix to the Preliminary Engineering Report.
- 1.2.4.5 The City will assist by providing names, addresses, email's and phone numbers of residents needing contacted.
- 1.3 PHASE 2- Planning and Design Phases.

Phase 2 services will be negotiated after the completion of Phase 1 and this Agreement will be amended at that time.

PROJECT TEAM

<u>Kurt Higgins, P.E., Sr. Vice President</u> shall be the Project Manager/Engineer, and <u>Charles Patterson, PhD,</u> <u>P.E.</u> shall be the lead Hydraulics and Hydrology Engineer, and <u>Sarah Simon, P.E.</u> shall be the Lee's Summit Liaison Engineer for the duration of the Project, unless the ENGINEER requests and receives the City's approval to appoint other personnel to these positions.

ARTICLE II OPTIONAL SERVICES TO BE PROVIDED BY ENGINEER

The following is a list of additional services which will be furnished by Engineer, if needed by City, upon receipt of written authorization by the Director of Public Works ("Optional Services"):

- 1.4 Optional Services.
 - 1.4.1 There are no optional services known at this time.

ARTICLE III SCOPE OF SERVICES TO BE PROVIDED BY CITY

City shall provide the following services to Engineer:

1.5 <u>City Services</u>

The City will cooperate fully with the Engineer in the development of the project, including the following:

- 1.5.1 Make available all information pertaining to the project which may be in the possession of the City.
- 1.5.2 Provide the Engineer with the City's requirements for the project.
- 1.5.3 Make provisions for the Engineer to enter upon property at the project site for the performance of his duties.
- 1.5.4 Examine all studies and layouts developed by the Engineer, obtain reviews by staff, and render decisions thereon in a prompt manner so as not to delay the Engineer.
- 1.5.5 Designate a City's employee to act as City's Person in Responsible Charge under this contract, such person shall have authority to transmit instructions, interpret the City's policies and render decisions with respect to matters covered by this agreement.
- 1.5.6 Perform appraisals and appraisal review, negotiate with property owners and otherwise provide all services in connection with acquiring all right-of-way needed to construct this project.
- 1.5.7 Perform any needed stormwater pipe inspections.
- 1.5.8 On-site construction observation and construction contract administration.
- 1.5.9 Advertise and obtain bids for the project including distribution of plans and specifications.
- 1.5.10 Waive any City fees/permits to Engineer, or its consultants relative to this project.

ARTICLE IV PAYMENTS TO THE ENGINEER

For the services performed by Engineer pursuant to this Agreement for Article I, Section 1.2 (PHASE 1 Services), and as full compensation therefore, and for all expenditures made and all expenses incurred by Engineer in connection with these sections of the Agreement, except as otherwise expressly provided herein, subject to and in conformance with all provisions of this Agreement, City will pay Engineer a maximum fee for Basic Services in the sum of <u>one hundred and fifty eight thousand Dollars</u> Dollars (\$158,000), according to the following provisions:

- A. The cost of all Basic Services covered under Article I, Section 1.2 shall be billed hourly at the rates set forth in Exhibit B attached hereto and incorporated herein by reference. Expenses incurred to provide the Basic Services shall be billed as set forth in Exhibit B. The total fees (hourly fees and expenses) for the Basic Services for Phase 1 shall not exceed the total sum of <u>one hundred and fifty eight thousand Dollars Dollars</u> (\$158,000).
- B. The cost of all Optional Services covered under Article II shall be billed hourly at the rates set forth in Exhibit B attached hereto and incorporated herein by reference. Expenses incurred to provide the Optional Services shall be billed as set forth in Exhibit B. Fees for these services will be provided after receiving written request.
- C. If so requested by Engineer, City will make payment monthly for Basic Services and Optional Services that have been satisfactorily completed. The City shall make payment to Engineer within a period not to exceed thirty (30) days from the date an invoice is received by City. All invoices shall contain the following information:

- 1. Project Name/Task Name/RFP Number/Description of Agreement.
- 2. Invoice Number and Date.
- 3. Purchase Order Number issued by City.
- 4. Itemized statement for the previous month of Labor (including Personnel Description, Title or classification for each person on the Project, Hours Worked, Hourly Rate, and Amount), Itemized Reimbursable Expenses, and Invoice Total.
- 5. Description of monthly progress detailing the amount of the services completed to date and projected completion time.
- 6. Project Billing Summary containing the Contract or Agreed Maximum Fee Amount, Cumulative Amount Previously Billed, Billing Amount this Invoice, Contract or Agreed Amount Remaining, and Percent of Maximum Fee Billed to Date.

All moneys not paid when due as provided herein shall bear interest at a per annum rate equal to one percent (1%) plus the average *Consumer Price Index for All Urban Consumers (CPI-U)-U.S. City Average* for the time period in which payment is past due; provided, however, that in no event will the amount of interest to be paid by the City exceed 9% per annum.

ARTICLE V COMPLETION TIME

The Basic Services shall be completed in accordance with the following schedule:

Assuming that the Notice to Proceed will be issued on, or before January 30, 2021, the following tentative schedule will be followed:

Engineering Analysis (Phase 1) of all four locations shall be completed around September 2021.

Engineering Design (Phase 2) with preliminary recommendations for Locations 1-4 shall be completed around June 2022.

Engineering Design (Phase 2) with final plans, specifications, and estimate, including and <u>bid documents</u> for Locations 3-4 shall be completed around January 2023 and for Locations 1-2 shall be completed around September 2023.

<u>Bidding phase</u> time frame shall be controlled by the City, but is anticipated to take place in Spring of 2023 for Locations 3-4 and Spring of 2024 for Locations 1-2.

<u>Construction Phase</u> to be determined, but may begin in Summer of 2023 thru the Winter of 2023 for Locations 3-4 and Summer of 2024 thru the Winter of 2024 for Locations 1-2.

The Director of Public Works may, with the mutual consent of the parties, amend the deadlines contained in this Article by written authorization upon a showing of cause for amendment by Engineer.

The Optional Services shall be completed in accordance with the deadlines set by the Director of Public Works and accepted by Engineer at the time said Optional Services are authorized by the Director of Public Works.

ARTICLE VI

- A. CERTIFICATE OF INSURANCE: The Engineer shall secure and maintain, throughout the duration of this contract, insurance of such types and in at least the amounts that are required herein. Engineer shall provide certificate(s) of insurance confirming the required protection on an ACORD 25 (or equivalent form). The City shall be notified by receipt of written notice from the insurer at least thirty (30) days prior to material modification or cancellation of any policy listed on the certificate(s). The City reserves the right to require formal copies of any Additional Insured endorsement, as well as the right to require completed copies of all insuring policies applicable to the project. The cost of such insurance shall be included in the Engineer's contract price.
- B. NOTICE OF CLAIM: The Engineer shall upon receipt of notice of any claim in connection with this contract promptly notify the City, providing full details thereof, including an estimate of the amount of loss or liability. The Engineer shall also promptly notify the City of any reduction in limits of protection afforded under any policy listed in the certificate(s) of insurance in excess of \$10,000.00, whether or not such impairment came about as a result of this contract. If the City shall subsequently determine that the Engineer's aggregate limits of protection shall have been impaired or reduced to such extent that they are inadequate for the balance of the project, the Engineer shall, upon notice from the City, promptly reinstate the original limits of liability required hereunder and shall furnish evidence thereof to the City.
- C. INDUSTRY RATING: The City will only accept coverage from an insurance carrier who offers proof that it is licensed to do business in the State of Missouri; carries a Best's policyholder rating of "A" or better; carries at least a Class VII financial rating or is a company mutually agreed upon by the City and the Engineer.
- D. SUB-CONSULTANT'S INSURANCE: If any part of the contract is to be sublet, the Engineer shall either:
 - 1. Cover all sub-consultants in the Engineer's liability insurance policy or,
 - 2. Require each sub-consultant not so covered to secure insurance in the minimum amounts required of the Engineer and submit such certificates to the City as outlined herein.

- E. SELF-INSURED RETENTIONS / DEDUCTIBLES: Any Engineer that maintains a Self-Insured Retention or Deductible (in excess of \$50,000) must be declared on the Certificates provided to the City. Such amounts shall be the sole responsibility of the Engineer. The City reserves the right to approve such self-insured retentions/deductibles and may require guarantees from the Engineer for such assumed limits.
- F. PROFESSIONAL LIABILITY: Professional Liability, or Errors and Omissions Insurance protection must be carried by Engineer in the minimum amount of \$1,000,000.

G. COMMERCIAL GENERAL LIABILITY POLICY

Limits:

1110.	
Each occurrence:	\$2,000,000
Personal & Advertising Injury:	\$2,000,000
Products/Completed Operations Aggregate:	\$2,000,000
General Aggregate:	\$2,000,000

Policy must include the following conditions: Bodily Injury and Property Damage Insured Contract's Contractual Liability Explosion, Collapse & Underground (if risk is present) Additional Insured: City of Lee's Summit, Missouri

H. AUTOMOBILE LIABILITY: Policy shall protect the Engineer against claims for bodily injury and/or property damage arising out of the ownership or use of any owned, hired and/or non-owned vehicle and must include protection for either:

1. Any Auto

2. or all Owned Autos; Hired Autos; and Non-Owned Autos

Limits:

Each Accident, Combined Single Limits,

Bodily Injury and Property Damage:

\$2,000,000

City of Lee's Summit, Missouri does NOT need to be named as additional insured on Automobile Liability

I. WORKERS' COMPENSATION: This insurance shall protect the Engineer against all claims under applicable state Workers' Compensation laws. The Engineer shall also be protected against claims for injury, disease or death of employees which, for any reason, may not fall within the provisions of a Workers' Compensation law and contain a waiver of subrogation against the City. The policy limits shall not be less than the following:

Workers' Compensation: Employer's Liability: Bodily Injury by Accident: Bodily Injury by Disease: Bodily Injury by Disease: Statutory

\$100,000 Each Accident \$500,000 Policy Limit \$100,000 Each Employee

- J. GENERAL INSURANCE PROVISIONS
 - 1. The insurance limits outlined above represent the minimum coverage limit and do not infer or place a limit of liability on the Engineer nor has the City assessed the risk that may be applicable to the Engineer.
 - 2. The Engineer's liability program will be primary and any insurance maintained by the City (including self-insurance) will not contribute with the coverage maintained by the Engineer.
 - 3. Coverage limits outlined above may be met by a combination of primary and excess liability insurance programs.
 - 4. Any coverage provided on a Claims Made policy form must contain a 3-year tail option (extended reporting period) or the program must be maintained for 3-years subsequent to completion of the Contract.
 - 5. Any failure on the part of the Engineer with any policy reporting provision shall not affect the coverage provided to the City.
 - 6. When "City" is utilized, this includes its officers, employees and volunteers in respect to their duties for the City.

ARTICLE VII MISCELLANEOUS PROVISIONS

The following miscellaneous provisions are agreed to by both parties to this Agreement:

- A. COVENANT AGAINST CONTINGENT FEES: Engineer warrants that Engineer has not employed or retained any company or person, other than a bona fide employee working for the Engineer, to solicit or secure this Agreement, and that Engineer has not paid or agreed to pay any company or person, other than bona fide employee, any fee, commission, percentage, brokerage fee, gifts, or any other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, the City shall have the right to annul this Agreement without liability or, at its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.
- B. OWNERSHIP OF ENGINEERING DOCUMENTS: Payment by City to Engineer as aforesaid in Article IV shall vest in City title to all drawings, sketches, studies, analyses, reports, models, and other paper, documents, computer files, and material produced by Engineer exclusively for the services performed pursuant to this Agreement up to the time of such payments, and the right to use the same without other or further compensation, provided that any use for another purpose shall be without liability to the Engineer. Any reuse without written verification or adaptation by Engineer for the specific purpose intended will be at City's risk and without liability or exposure to Engineer, and City shall indemnify and hold harmless, to the extent allowed by the Constitution and Laws of the State of Missouri, Engineer from all claims, damages, losses, expenses, including attorneys' fees arising out of or resulting therefrom.

- C. MODIFICATIONS TO AGREEMENT: In the event of any changes in the scope of services contained in this Agreement, prior to commencing the services City and Engineer shall enter into a modification of this Agreement describing the changes in the services to be provided by Engineer and City, providing for compensation for any additional services to be performed by Engineer, and providing completion times for said services.
- D. EMERGENCY CHANGES IN SERVICES: The Director of Public Works, with the consent of the City Manager, is authorized to execute on behalf of the City modification agreements as provided for in subsection C. above where there is an emergency and the overall compensation authorized in Article IV above, and any supplements or modifications thereto, is not increased. For purposes of this subsection, an "emergency" shall mean those unforeseen circumstances that present an immediate threat to public health, welfare, or safety; or when immediate response is necessary to prevent further damage to public property, machinery, or equipment; or when delay would result in significant financial impacts to the City as determined by the Director of Public Works and the City Manager.

In the event an emergency change in services is authorized by the Director of Public Works and the City Manager pursuant to this provision, the modification agreement shall be submitted to the City Council for ratification at its next available meeting.

- E. TERMINATION: In the event of termination by City, if there are any services hereunder in progress but not completed as of the date of termination, then said Agreement may be extended upon written approval of the City until said services are completed and accepted.
 - <u>Termination for Convenience</u>: The services called for by this Agreement or any supplements thereto may be terminated upon request and for the convenience of City upon thirty (30) days advance written notice. City shall pay Engineer for all services rendered up to the date of termination.
 - 2. <u>Termination for Cause</u>: This Agreement may also be terminated for cause by City or Engineer. Termination for cause shall be preceded by a fourteen-(14) day correction period effective upon delivery of written notice. City shall pay Engineer for all services rendered up to the date of termination. In the event of termination for cause by City, compensation for services rendered by Engineer up to the date of termination shall be offset by City's reasonable cost to mitigate or correct the effects of such termination.
 - 3. <u>Termination Due to Unavailability of Funds in Succeeding Fiscal Years</u>: When funds are not appropriated or otherwise made available to support continuation of the Project in a subsequent fiscal year, this Agreement shall be terminated and Engineer shall be reimbursed for the services rendered up to the date of termination plus the reasonable value of any nonrecurring costs incurred by Engineer but not amortized in the price of the services delivered under this Agreement.

- F. COMPLIANCE WITH LAWS: Engineer shall comply with all Federal, State, and local laws, ordinances, and regulations applicable to the services. Engineer shall secure all licenses, permits, etc. from public and private sources necessary for the fulfillment of its obligations under this Agreement.
- G. SUBLETTING ASSIGNMENT OR TRANSFER: Engineer shall not sublet, assign, or transfer any interest in the services covered by this Agreement, except as provided for herein and except with the prior written consent of City. The use of subcontractors shall in no way relieve Engineer of his/her primary responsibility for the services. No approval will be necessary for non-professional services such as reproductions, printing, materials, and other services normally performed or provided by others.
- H. CONFERENCES, VISITS TO SITE, INSPECTION OF SERVICES: Upon reasonable advance notice and during normal business hours at Engineer's place of business, representatives of City shall have the privilege of inspecting and reviewing the services being performed by Engineer and consulting with him/her at such time. Conferences are to be held at the request of City or Engineer.
- I. ENGINEER'S ENDORSEMENT: Engineer shall endorse all plans, specifications, estimates, and engineering data furnished by him/her.
- J. INSPECTION OF DOCUMENTS: Engineer shall maintain all records pertaining to its services hereunder for inspection, upon reasonable advance notice and during normal business hours at Engineer's place of business, by a City representative during the contract period and for three (3) years from the date of final payment for each individual project performed pursuant to this Agreement.
- K. INDEMNIFICATION AND HOLD HARMLESS: Engineer shall indemnify and hold harmless City and its officers, employees, elected officials, and attorneys, each in their official and individual capacities, from and against judgments, damages, losses, expenses, including reasonable attorneys' fees, to the extent caused by the negligent acts, errors, omissions, or willful misconduct of Engineer, or its employees, or subcontractors, in the performance of Engineer's duties under this Agreement, or any supplements or amendments thereto.
- L. LIMITATION OF LIABILITY: In no event will City be liable to Engineer for indirect or consequential damages, and in no event will City's liability under this Agreement exceed the amount to be paid to Engineer pursuant to Article IV of this Agreement.
- M. PROFESSIONAL RESPONSIBILITY: Engineer will exercise reasonable skill, care, and diligence in the performance of its services in accordance with customarily accepted professional engineering practices. If Engineer fails to meet the foregoing standard, Engineer will perform at its own cost, and without reimbursement from City, the professional engineering services necessary to correct errors and omissions that are caused by Engineer's failure to comply with above standard, and that are reported to Engineer within one year from the completion of Engineer's services for each individual project performed pursuant to this Agreement.

- N. ENTIRE AGREEMENT: This Agreement constitutes the entire agreement between the parties with respect to its subject matter, and any prior agreements, understandings, or other matters, whether oral or written, are of no further force or effect. This Agreement may be amended, changed, or supplemented only by written agreement executed by both of the parties hereto.
- O. CONFLICT: In the event of any conflict, ambiguity, or inconsistency between this Agreement and any other document that may be annexed hereto, the terms of this Agreement shall govern.
- P. GOVERNING LAW: This Agreement shall be governed by and construed in accordance with the laws of the State of Missouri.
- Q. OPINION OF PROBABLE CONSTRUCTION COST AND SCHEDULE: Since Engineer has no control over the cost of labor, materials, or equipment, or over contractor's(s') methods of determining prices, or over competitive bidding or market conditions, the estimate of construction cost and schedule provided for herein is to be made on the basis of Engineer's experience and qualifications and represents Engineer's best judgment as a professional engineer familiar with the construction industry, but Engineer cannot and does not guarantee that the bids or the Project construction cost or schedule will not vary from the opinion of probable construction cost and schedule prepared by Engineer.
- R. TAX EXEMPT: City and its agencies are exempt from State and local sales taxes. Sites of all transactions derived from this Agreement shall be deemed to have been accomplished within the State of Missouri.
- S. SAFETY: In the performance of its services, Engineer shall comply with the applicable provisions of the Federal Occupational Safety and Health Act, as well as any pertinent Federal, State and/or local safety or environmental codes.
- T. ANTI-DISCRIMINATION CLAUSE: Engineer and its agents, employees, or subcontractors shall not in any way, directly or indirectly, discriminate against any person because of age, race, color, handicap, sex, national origin, or religious creed.
- U. DELAY IN PERFORMANCE: Neither City nor Engineer shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the nonperforming party. For purposes of this Agreement, such circumstances include, but are not limited to, abnormal weather conditions, floods, earthquakes, fire, epidemics, war, riots, and other civil disturbances, strikes, lockouts, work slowdowns, and other labor disturbances, sabotage, judicial restraint, and delay in or inability to procure permits, licenses, or authorizations from any local, State, or Federal agency for any of the supplies, materials, accesses, or services required to be provided by either City or Engineer under this Agreement. Engineer and City shall be granted a reasonable extension of time for any delay in its performance caused by any such circumstances. Should such circumstances occur, the nonperforming party shall within a reasonable time of being prevented from performing, give written notice

to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of the Agreement.

- V. NO THIRD-PARTY RIGHTS: The services provided for in this Agreement are for the sole use and benefit of City and Engineer. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than City and Engineer.
- W. NOTICE: Whenever any notice is required by this Agreement to be made, given or transmitted to any party, it shall be enclosed in an envelope with sufficient postage attached to ensure delivery and deposited in the United States Mail, first class, with notices to City addressed to:

City Engineer	Director of Public Works
City of Lee's Summit	City of Lee's Summit
220 SE Green Street	200 SE Green Street
Lee's Summit, MO 64063	Lee's Summit, MO 64063

and notices to Engineer shall be addressed to:

Allgeier, Martin and Associates, Inc. Kurt Higgins, P.E., Sr. Vice President 7231 E. 24th Street Joplin, MO 64804

or such place as either party shall designate by written notice to the other. Said notices may also be personally hand delivered by each party to the other, at the respective addresses listed above. If hand delivered, the date of actual completion of delivery shall be considered the date of receipt. If mailed, the notice shall be considered received the third day after the date of postage.

ARTICLE VIII ALL OTHER TERMS REMAIN IN EFFECT

Reserved.

THIS AGREEMENT shall be binding on the parties thereto only after it has been duly executed and approved by City and Engineer.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed on the ____ day of_____, 20___.

CITY OF LEE'S SUMMIT

Stephen A. Arbo, City Manager

APPROVED AS TO FORM:

Nancy Yendes Chief Counsel of Infrastructure and Planning

ENGINEER:

BY: Kurt Higgins, P.E. TITLE: Sr. Vice President

ATTEST: ١

BY: Chris Erisman, P.E. TITLE: Sr. Vice President

Project Name: East Fork of Little Blue Watershed Stormwater Improvement Project

Project Number: 543 (Fund 322 – CIP Sales Tax Renewal)

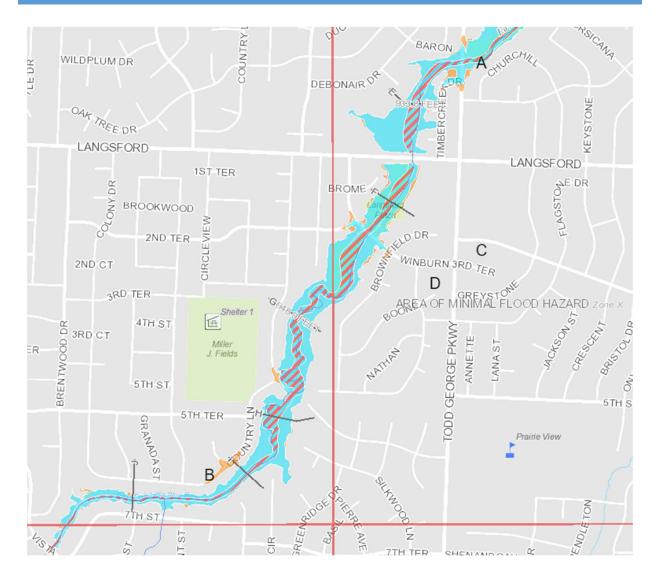
Form Prepared by: Karen Quackenbush

Project Category/Type: Stormwater Improvements

Description/Location/Limits of Project

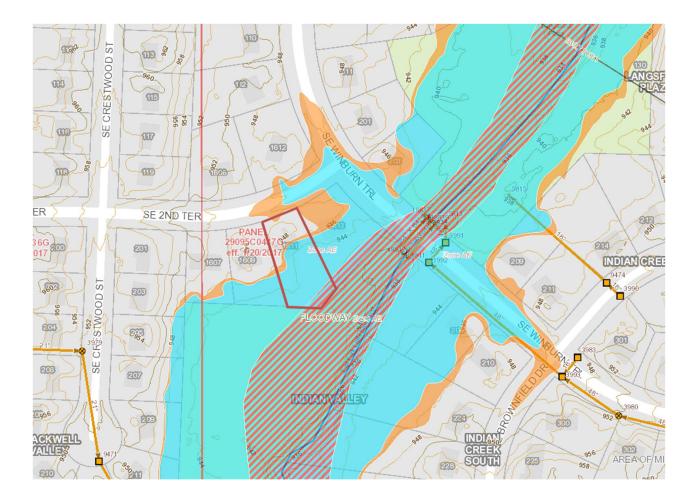
The head of the East Fork of Little Blue is north east of the 291N and 50 HWY interchange and flows in a northeasterly direction. Currently, there are 3 street crossings within the scope of this project: Winburn Trail, Langsford Road, and Todd George Parkway. There are several properties along the stream that have homes located in the mapped floodplain. Upstream of Winburn Trail, the City has documentation in the form of submitted flood forms indicating that 4 properties along the East Fork of Little Blue experience structural flooding. In addition to flooding along the stream, there are five homes south of Langsford Road near Todd George Pkwy that are part of the watershed to the East Fork that have also submitted flood forms. It is the City's goal to approach flooding in this area by looking at the entire watershed. The scope of the project includes the following: Analysis of the East Fork of Little Blue from just downstream of Todd George Parkway up to the property at 1319 SE 6th St (points A and B on the map below), potential design work along the stream between the Langsford Road culvert and up to point B, evaluation of the public systems that outlet into the stream near 1327 and 1355 SE 6th Street (point B), evaluation of the watershed that contributes to the sag inlets on 3rd Street just east of Todd George Pkwy (point C), and evaluation of the watershed that contributes to the public system that comes down Todd George from 50 Hwy and conveys to the northwest across Boone Trail (point D), along Winburn Trail, and into the stream.

This is an overall description of the project. In paragraphs to follow, there will be additional location specific descriptions.



The first location (outlined in red and typical throughout the memo) along the stream with reported flooding is 1611 SE 2nd Terrace. At SE Winburn Trail, the East Fork of Little Blue flows through a triple 84" x 84" RCB. It is uncertain if culvert improvements can improve the situation without simply pushing the issue downstream. If culvert improvements are to be considered it will be necessary to look at the effects of the overall stream all the way to Todd George Parkway. I want to point out that we have flooding along the east side of the stream near Timbercreek Drive, but improvements to alleviate flooding for these structures is not part of this scope of work.

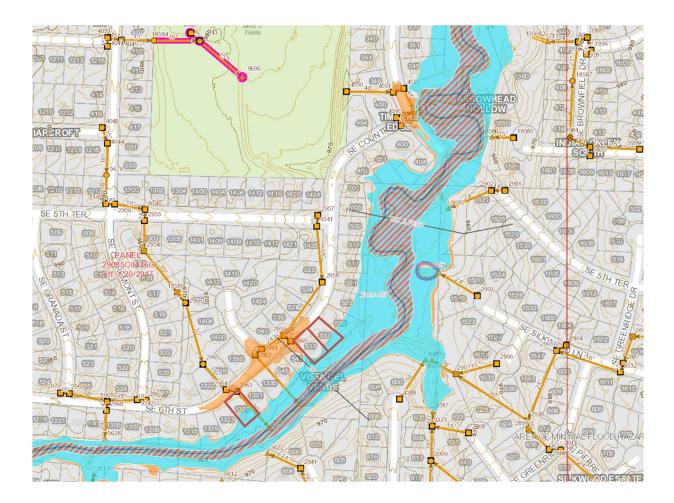
Surveying design work will include easement document preparation and property tract map exhibits. City owned utilities in the area are water and sanitary sewer. Coordination with other utilities will also be included.



The second location along the stream with reported flooding includes 3 properties: 533 Country Lane, 537 Country Lane, and 1327 6th Street. The scope of this portion of the project would be to continue to look at the stream upstream of Winburn Trail all the way to the property at 1327 6th Street, and the public stormwater systems in the Vista Del Verde subdivision. Please re-visit the effects of a possible new culvert at SE 5th Terrace/Bordner Drive with associated roadway improvements. In looking at the FEMA map, it appears that there are many homes along the tributary that are located in the floodplain. It will be necessary to determine if the source of flooding for the three properties is the stream, inadequate conveyance in the public systems, or both.

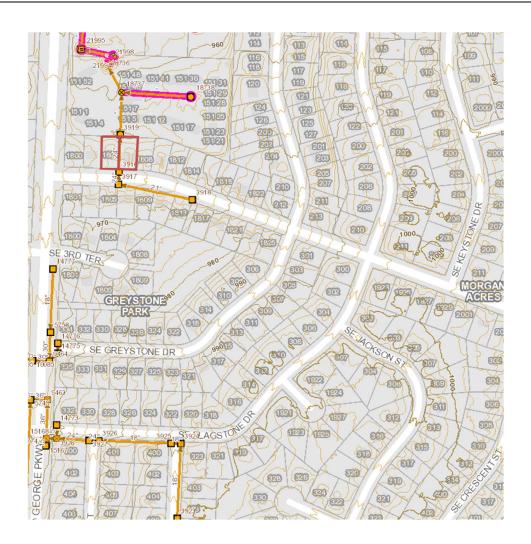
Currently the public stormwater infrastructure in the area includes two separate public systems that outlet into the stream. There is a system that starts at the intersection of 5th Terrace and Country Lane and outlets into the stream along the north property line of 1335 6th Street. The second system starts up at the intersection of 5th Street and Claremont Street and outlets into the stream along the north property line of 1327 6th Street.

Surveying design work may include easement document preparation and property tract map exhibits. It is possible that city right-of-way and existing easements will be sufficient to install any improvements. City owned utilities in the area are water and sanitary sewer. Coordination with other utilities will also be included.

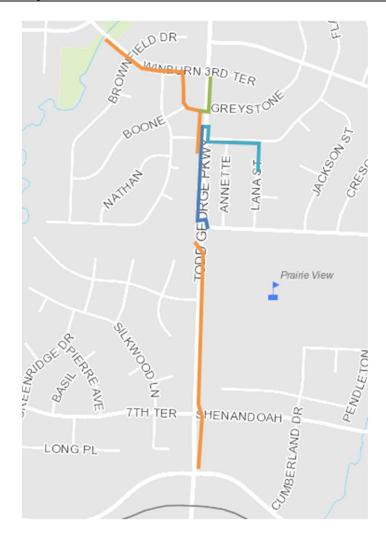


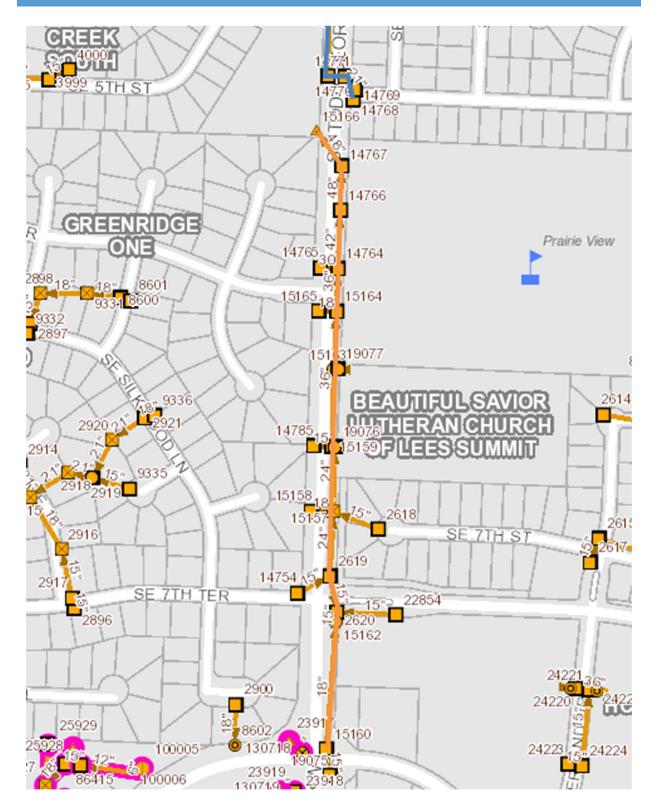
The third location in the watershed with reported flooding includes 2 properties: 1804 3rd Street and 1806 3rd Street. It will be necessary to evaluate the public system near these homes. The public system near the homes on 3rd Street consists of three curb opening inlets, approximately 265 feet of 21" RCP, and approximately 160 feet of 24" RCP. This small system connects to a field inlet at the rear of the 3rd Street properties, continues down the east side of Todd George Parkway, and eventually outlets into the East Fork of Little Blue downstream of Todd George Pkwy. When reviewing the existing infrastructure it is apparent that the flooding source is due to a lack of inlets and pipes. There are multiple side streets that tie into 3rd that have essentially uncollected flow. Approximately 16 acres of residential land use contribute to the three inlets on 3rd (two sag inlets and only one additional inlet). In addition to the 24" RCP that runs between 1804 and 1806 3rd Street, the City installed four 12" HDPE pipes to help alleviate flooding. It appears that these pipes help to relieve flooding during frequent storm events. Although we have not received flood forms from residents on 3rd Terrace, it appears that they flood as well. The source of flooding is runoff from properties on Greystone and the triangular open field to the east of the cul-de-sac.

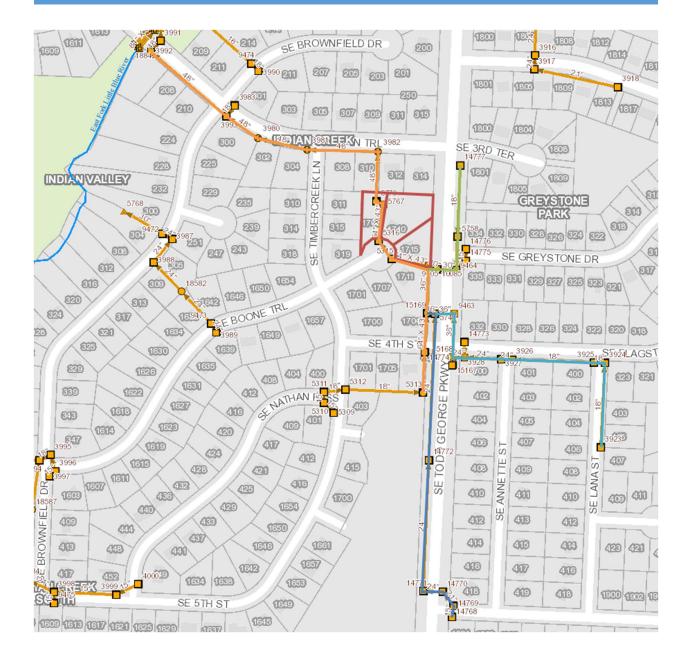
Surveying design work may include easement document preparation and property tract map exhibits. It is possible that city right-of-way and existing easements will be sufficient to install any improvements. City owned utilities in the area are water and sanitary sewer. Coordination with other utilities will also be included.



The fourth location in the watershed with reported flooding includes 3 properties: 1706 Boone Trail, 1710 Boone Trail, and 1715 Boone Trail. It will be necessary to evaluate the public systems near these homes. There are four systems that combine at the cul-de-sac and are conveyed through 64" x 43" CMAP's. The first system (orange) starts all the way up at the 50 Hwy Interchange. The trunk line from 50 Hwy to a point about 240' south of 5th Street is located on the east side of the road. It crosses Todd George about 240 feet south of 5th Street and outlets through a 48" RCP into the small wooded area south of 4th Street. This flow is collected in a field inlet near the SE corner of 1709 4th Street, crosses under 4th Street, goes on down the west side of Todd George, along the property lines of the homes on Boone Trail, and then along the south side of Winburn Trail where it discharges through a 48" RCP and into the East Fork of Little Blue just downstream of the triple box culvert. The second system (blue) starts at the intersection of 5th Street and Todd George. It crosses the road just north of the intersection, goes down the west side of the street and connects into the first system at a field inlet located near the NE corner of the property of 1704 4th Street. The third system (teal) collects flow from Flagstone Drive, and connects at the same point as the second system. The fourth system (lime green) collects flow from Greystone Drive and 3rd Terrace, and connects to the first system through a manhole located at the SE corner of 1715 Boone Trail. It is also this fourth system that is responsible for conveying the sag of Todd George Parkway. In addition to the systems along Todd George, it is also possible that some of the flooding is from flow from Timbercreek Lane. Please take a look at the drainage from the west as well.







Primary Purpose/Justification for Project

The primary purpose for this project is to address structural flooding of the properties at 1611 SE 2nd Terrace, 533 Country Lane, 537 Country Lane, 1327 6th Street, 1804 3rd Street, 1806 3rd Street, 1706 Boone Trail, 1710 Boon Trail, and 1715 Boone Trail.

Design Criteria

Design: Consultant

Options: Culvert improvements, stream improvements, enclosed system improvements, overflow swale improvements, combination, and property buyout.

Culvert and Stream improvements

FEMA flows are sufficient. Alternatively, flows are to be determined with HEC-HMS or comparable software.

Improvements to the culverts at Todd George Parkway and Langsford Road are not being considered.

Improvements to the stream north of Langsford Road are not being considered. Hydraulic design is to be with HEC-RAS.

It will be necessary to start with the most current FEMA duplicate effective model. Desired freeboard for structure low opening is 2 feet above the base flood elevation. Minimum freeboard for structure low opening is 1 foot above the base flood elevation. Multi-Cell culverts shall have a low flow cell.

Culvert options can include complete replacement and/or culvert inlet improvements

Enclosed system improvements

Flows can be determined with the the appropriate Method. On-grade inlets and pipes are to convey the 10-yr storm event Allowable Spread – 12 feet from back of curb Sag inlets and pipes are to follow APWA Section 5601.8

Overflow Swale

Typically the inlets and pipes are not sized to collect and convey the 100-yr storm. It is necessary to determine at what storm event the local system will surcharge. The overflow swale will need to convey that flow. Acceptable options for the overflow swale are the street and well defined swales along side property lines.

Property buyout

Typically the City avoids single property acquisition. If we have owner buy in, we would consider the buyout of properties adjacent to the ones listed above. We would also consider the buyout of properties located in the floodplain in an effort to provide additional storage along the stream.

Utilities: It will be necessary to determine all utilities in the area and contact each one in an effort to determine what needs they may have. It will be necessary to determine if the utility is located in right-of-way, City easement, or private easement. City owned utilities by location are as follows:

Winburn Trail

Currently there is an 8-inch water main that runs along the south side of Winburn Trail, a 24-inch sanitary sewer main that runs parallel to the stream, and an 8-inch sanitary sewer main that runs along the north side of Winburn Trail. At this point, it does not appear that any water or sanitary relocations will be needed, but that will be determined as we get further into design.

Along the East Fork of Little Blue up gradient of Winburn Trail

At approximately FEMA cross section G (roughly 313 Bordner Drive), two sanitary sewer mains combine into the 24-inch main that goes under Winburn Trail. The two mains run along either side (for the most part) of the stream and vary in size between a 12-inch and 15-inch pipe.

Vista Del Verde Subdivision

Currently there are 6-inch water mains within the public right-of-ways. On 6th Street and Country Lane the 6-inch main is primarily located along the west side of the street.

Currently there are 6-inch sanitary mains within the public right-of-ways. On 6th Street and Country Lane the 6-inch mains are located along the east side of the street and connect into the 12-inch main that runs along the west side of the stream.

At this point, it does not appear that any water or sanitary relocations will be needed, but that will be determined as we get further into design.

Greystone Park Subdivision

Currently there are 4-inch, 6-inch, and 8-inch water mains within the public right-of-ways. Along 3rd Street, 3rd Terrace, and Greystone Drive, the mains are located on the south side of the streets.

Currently there are 8-inch sanitary mains within the public right-of-ways, and they are located opposite to the water mains.

At this point, it does not appear that any water or sanitary relocations will be needed, but that will be determined as we get further into design.

Morgan Acres Subdivision

Currently there are 4-inch, 6-inch, and 8-inch water mains within the public right-of-ways. Along 3rd Street the mains are located on the north side of the street. Along Flagstone Drive and Court the mains are located on the south and east side of the street. Along Jackson Street the mains are located on the south and west side of the street.

Currently there are 8-inch sanitary mains within the public right-of-ways, and they are located opposite to the water mains.

At this point, it does not appear that any water or sanitary relocations will be needed, but that will be determined as we get further into design.

Indian Creek and Indian Creek South Subdivisions

Currently there are 6-inch and 8-inch water mains within the public right-of-ways. Along Winburn Trail the main is located on the south side of the street. Along Brownfield Drive the main is located along the east side of the street. Along Timbercreek Lane, Boone Trail, and 4th Street the mains are located on the west and north side of the street.

Currently there are 8-inch sanitary mains within the public right-of-ways, and they are located opposite to the water mains. I would like to point out that the sanitary runs very close to the storm sewer along the property lines between 1706 and 1710 Boone Trail and between 1715 and 1711 Boone Trail. Additionally, these lines are the conveyance of the sag of Todd George.

<u>Along the Todd George Parkway Corridor between 5th Street and Winburn Trail</u> It is possible that storm sewer improvements could extend as far as the small wooded area just south of 4th Street. Additionally, I do not expect any local storm sewer improvements to go north of Langsford Road.

Currently there are two separate water systems that run parallel to Todd George. South of 4th Street, there is an 8-inch water main along the west side of the road. At 4th Street it increases to a 12-inch. There is also a 16-inch main that is on the west side of the road, and then approximately 300 feet south of Flagstone and Todd George it crosses to the east side and at that point it is classified as a major distribution main. I point out the classification because we tend to make every effort to not disturb the major distribution mains and additionally they are typically located lower than the standard 42 inch depth.

Currently there is an 8-inch sanitary main located in the small wooded area just south of 4th Street. It runs parallel to Todd George, goes under 4th Street and then ties into the system at the cul-de-sac on Boone Trail. On the east side of Todd George there is an 8-inch main that runs from Flagstone to 3rd Terrace. It then goes under Todd George and runs to the west along the north side of Winburn Trail.

Possible Permits: No-rise certificate, floodplain development permit, USACE Section 404, MDNR 401, land disturbance, LSMO grading, CLOMR/LOMR process through FEMA

Construction Options: There exists work potentially 1) along the East Fork of Little Blue, 2) at Vista Del Verde, 3) at the subdivisions south of 3rd Street on the east side of Todd George, and 4) at the subdivisions south of Winburn Trail on the west side of Todd George. I could see where there could be many options, but in an effort to install improvements for the residents on 3rd Street and Boone Trail first, it will be necessary to bid out the local system improvements adjacent to Todd George (3 and 4) in one package and the local system improvements at Vista Del Verde and the stream improvements in a separate package. They could even bid out in separate years.

Project Plan

From a high level look, there are four separate locations that need to be looked at – 1) the East Fork of Little Blue, 2) the Vista Del Verde subdivision, 3) the Greystone Park and Morgan Acres subdivisions, and 4) the Indian Creek and Indian Creek South subdivisions. Perform a preliminary engineering study that address flooding in these areas. The study that addresses flooding along the East Fork of Little Blue will determine the impacts on adjacent properties that are the result of improvements to the Winburn Trail culvert, adding a culvert and associated roadway at the 5th Terrace crossing, and/or any stream improvements upstream of Langsford Road. The study that addresses flooding in the Vista Del Verde subdivision should include

analysis of the stream, both local systems, and residential coordination/input from property owners. The study that addresses flooding at the sag of 3rd Street needs to look at the addition of inlets and pipes to the east as well as impacts to properties to the north. No doubt the addition of inlets and pipes contributing to the sag will increase flows to the downstream system. It will be necessary to design improvements in such a manner as to not simply push the flooding to downstream properties. Based on any analysis that comes out of the study and associated costs to keep conveyance on the east side of Todd George, it may be advantageous to come up with an alternate alignment that conveys flows under Todd George, along the south property line of Langsford Plaza (SW corner of Todd George and Langsford), and then into the East Fork of Little Blue at a point downstream of Winburn Trail. At first glance it does not appear that the flows from the 100-yr storm event of this small watershed will have much impact on the stream, but I will leave that determination up to Allgeier Martin. The study that addresses flooding at the cul-de-sac of Boone Trail will evaluate the four systems identified earlier. Although it does not appear that improvements should extend south of 4th Street, it is necessary to look at the capacity of the upstream systems in an effort to determine overland flow at the sag of Todd George Parkway. Not only do the residents flood, but also the sag of Todd George is under water during infrequent rain events. Runoff from Todd George flows in a northwest direction across the properties on Boone Trail. Additionally, runoff down Boone Trail from Timbercreek Lane creates flooding conditions. As was briefly mentioned in the utility section of this memo, any improvements along the current alignment of the storm system will produce significant construction obstacles. It may be advantageous to come up with an alternate alignment that begins at 4th Street and utilizes the Timbercreek Lane right-of-way. Based on design flows, it may be necessary to increase the existing 48" RCP's located along the south side of Winburn Trail.

It is up to Allgeier Martin as to how you want to go about submitting the needed reports. You can submit one large report that addresses all of the sites, or you can submit them individually. It has been communicated to the residents on 3rd Street and Boone Trail that design will begin late this year, and that installation of any improvements will be during the 2022 construction season. After our discussion earlier today, and looking at the schedule, it appears that a more realistic construction schedule will be in 2023. Additionally, it is critical that we look at the different locations systematically and that we address flooding for those that have had issues longer first. All reports submitted should provide the City with alternatives and associated costs.

Once the City has agreed on alternatives presented from the study, we can then begin to work out the scope and fee for Phase II which is the design phase. First, locate and mark existing underground utilities and work with utility companies to relocate where necessary. Design the needed improvements. Given the lengthy time it takes to approve construction activities in the stream, it is important to realize that final design work for locations 3 and 4 will take place prior to locations 1 and 2. Prepare the necessary documents needed for permitting. The City is interested in completing a CLOMR application with FEMA. Beyond construction, Allgeier Martin will perform the needed surveys and other steps to complete the map revision. It will be up to the individual property owners to obtain an elevation certificate.

During the bid phase, work on an addendum to the original contract. The addendum will address construction phase services like, for example, submittal reviews of materials submitted by the contractor.

Anticipated Schedule

Project Phase	Begin Date (Mo/Yr)	Completion Date (Mo/Yr)
Negotiation of Phase I scope and fee	December 2020	January 7, 2021 (PWC)
Phase I – Study (locations 1-4)	February 2021	August 2021
Negotiation of Phase II scope and fee	October 2021	December PWC
Phase II – Design – Preliminary (locations 1-4)	Mid December 2021	June 2022
Phase II – Design – Final (locations 3-4)	July 2022	January 2023
ROW Appraisals & Acquisitions	July 2022	December 2022
Permits	January 2022	January 2023
Design – Final (locations 1 and 2)	January 2023	September 2023
Utility Relocations	September 2023	December 2023
Bid & Award (locations 3 and 4)	January 2023	March 2023
Bid & Award (locations 1 and 2)	January 2024	March 2024

Funding

The 2017 CIP Sales Tax. The sales tax is the funding source of multiple stormwater projects in the City. For this project, the total budget is \$3,121,000.

Is the current budget sufficient for the estimated project costs? <u>X</u> Yes <u>No</u>

If not, describe proposed approach to addressing budget shortfall (reduction in project scope, request for additional funding in next CIP cycle, transfer funds from other projects, etc.)

Engineering Staff is authorized to proceed with work on this project. Sufficient funding has been identified for estimated design costs. The consultant selection process may begin if the project is not being designed in house.

City Engineer

Date

Exhibit **B**

ALLGEIER, MARTIN and ASSOCIATES, INC.

Consulting Engineers and Surveyors

RATE SCHEDULE 2021, 2022 and 2023

LABOR RATES

Hourly Billing Rate

Classification Principal/Engineer V Principal/Engineer IV Principal/Engineer III Project Manager/Engineer II Project Manager/Engineer I Technician III/GIS Specialist Technician III Technician II Technician I Two-Man GPS Survey Crew One-Man GPS Survey Crew Three-Man Survey Crew Two-Man Survey Crew Registered Land Surveyor II Registered Land Surveyor I Survey Crew Member Right of Way Specialist Project Representative II Project Representative II	01/01/2021 thru 12/31/2021 \$232 \$210 \$194 \$172 \$156 \$142 \$120 \$108 \$101 \$199 \$156 \$216 \$172 \$183 \$161 \$82 \$125 \$120 \$108	01/01/2022 thru <u>12/31/2022</u> \$240 \$217 \$200 \$178 \$162 \$147 \$124 \$111 \$105 \$206 \$162 \$224 \$178 \$190 \$167 \$85 \$130 \$124 \$111 \$102	01/01/2023 thru 12/31/2023 \$248 \$225 \$207 \$184 \$167 \$152 \$129 \$115 \$109 \$213 \$167 \$232 \$184 \$196 \$173 \$88 \$134 \$129 \$115 \$106
· ···· • • • • • • • • • • • • • • • •	40	<i>430</i>	<i>430</i>

Note: All pre-approved overtime hours shall be invoiced at 1 ½ times the hourly billing rates shown above

NON-LABOR RATES

Item Travel Subsistence Lodging Special Postage or Shipping Printing Surveying Materials Subcontract Specialty Services Deposition & Court Testimony Rate \$0.57 per mile (or current IRS rate) Actual Cost Cost + 10% Standard Hourly Billing Rate x 2