

MAYOR
George B McGill

CITY ADMINISTRATOR
Carl E Geffken

CITY CLERK
Sherri Gard

BOARD OF DIRECTORS
Ward 1 - Jarred Rego
Ward 2 - Andre' Good
Ward 3 - Lavon Morton
Ward 4 - George Catsavis
At-Large Position 5 - Christina Catsavis
At-Large Position 6 - Kevin Settle
At-Large Position 7 - Neal Martin

AGENDA

Fort Smith Board of Directors

STUDY SESSION

September 12, 2023 ~ 6:00 p.m.
Blue Lion
101 North 2nd Street
Fort Smith, Arkansas

THIS MEETING IS BEING TELECAST LIVE AT THE FOLLOWING LINK:
https://fortsmithar.granicus.com/ViewPublisher.php?view_id=1

CALL TO ORDER

ITEMS OF BUSINESS

1. Presentation regarding affordable housing in the city of Fort Smith (*Community Development*)
2. Discussion regarding an engineering services agreement for the Free Ferry Road and Albert Pike Avenue Intersection Improvements, Project No. 23-09-A (\$189,016.00 / Budgeted / Engineering - Sales Tax Program) ~ Settle/G. Catsavis placed on future study session at the August 15, 2023 regular meeting ~ (Engineering) ♦
3. Items regarding updates to departmental 2023 CIP Projects: ~ Director Morton requested at the July 11, 2023 regular meeting ~ (City Administrator)
 - 3A. Water Systems Maintenance and Improvements ~ Deferred from the August 29, 2023 study session ~ (Water Utilities)
 - 3B. Wastewater Systems Maintenance and Improvements (Non-Consent Decree) ~ Deferred from the August 29, 2023 study session ~ (Water Utilities)
 - 3C. Wastewater Systems and Maintenance and Improvements (Consent Decree) ~ Deferred from the August 29, 2023 study session ~ (Water Utilities) ●

4. Review preliminary agenda for the September 19, 2023 regular meeting (*City Clerk*)

CITIZENS FORUM

ADJOURN



MEMORANDUM

TO: Carl E. Geffken, City Administrator
CC: Jeff Dingman, Deputy City Administrator
FROM: Candyce Gabucci, Director of Community Development
DATE: September 7, 2023
SUBJECT: Presentation regarding affordable housing in the city of Fort Smith

SUMMARY

A presentation will be made by Candyce Gabucci regarding affordable housing within the city of Fort Smith as it pertains to the Community Development Block Grant as well as the HOME Investment Partnership Program. Caleb Brown with Crawford Sebastian Community Development Council (CSCDC) will also be present to discuss the role their organization plays in affordable housing in the Fort Smith area.



MEMORANDUM

TO: Carl Geffken, City Administrator
CC: Jeff Dingman, Deputy City Administrator
FROM: Stan Snodgrass, Director of Engineering
DATE: September 7, 2023
SUBJECT: Engineering Services Agreement for the design of Intersection Improvements - Free Ferry Road and Albert Pike Avenue Project No. 23-09-A

SUMMARY

The subject item was tabled at the August 15, 2023 regular meeting for discussion at a study session. The complete item packet from the August 15, 2023 meeting is attached for reference.

Also attached is the complete item packet from the Study Session in July 2013 when improvements to this intersection were also discussed.

Please let me know if you have any questions.

ATTACHMENTS

1. [ESA for Free Ferry and Albert Pike Intersection - Item 7B 081523.pdf](#)
2. [Study Session July 2013 Albert Pike and Free Ferry.pdf](#)

FISCAL IMPACT: \$189,016.00
BUDGET INFORMATION: Budgeted / Engineering - Sales Tax Program



MEMORANDUM



TO: Carl Geffken, City Administrator
CC: Jeff Dingman, Deputy City Administrator
FROM: Stan Snodgrass, Director of Engineering
DATE: August 7, 2023
SUBJECT: Intersection Improvements – Free Ferry Road and Albert Pike Avenue
 Project No. 23-09-A

SUMMARY

This project includes the construction of a roundabout at the intersection of Free Ferry Road and Albert Pike Avenue. A location map is attached.

The City's Traffic Accidents Report Study identifies the top ten intersections with the highest rate of accidents when compared to their daily traffic. The intersection of Free Ferry Road and Albert Pike Avenue was ranked number 7 in 2021 and number 10 in 2022. This rating is based on criteria from the Transportation and Traffic Engineering Handbook which considers the number of accidents relative to the average annual daily traffic. There were 10 accidents in 2021 and 8 accidents in 2022 at this intersection which is currently a 4-way stop.

In June of this year, Traffic Engineering Consultants completed their Traffic Capacity Analysis for this intersection. Their analysis provided the following recommendations:

“Based on the results of the analyses conducted, installation of a traffic signal or construction of a roundabout should be considered for the intersection of Free Ferry Road and Albert Pike Avenue. While both are expected to operate at overall acceptable levels-of-service “A”, the roundabout is expected to be more cost-effective overall than a traffic signal. Given the relatively high crash rates and highly residential surrounding land use resulting in low truck traffic, the intersection of Free Ferry Road and Albert Pike Avenue would be a good candidate for a roundabout.”

The professional services qualifications on file with the City Clerk's office were reviewed and the firm of Mickle Griffin Engineers was selected to develop the construction plans. A summary of the considered firms is attached. The cost for the engineering services is set at a maximum not to exceed fee as noted on the resolution and payment will be based on hourly rates for the actual hours worked on the project.

This project aligns with the goals of the comprehensive plan policies FLU-1.4 (Ensure adequate, well-maintained infrastructure, public safety, and public facilities for all development and prevent development ahead of infrastructure and service provision) and TI-4.2 (Ensure that utility and infrastructure systems can meet the city's long-term needs).

The attached Resolution authorizes the Mayor to execute the engineering services agreement for the design services. I recommend that the Resolution be adopted by the Board at the next regular meeting.

ATTACHMENTS

1. [23-09-A_ESA_Resolution.pdf](#)
2. [23-09-A_ESA_Location Map.pdf](#)
3. [23-09-A_ESA_Selection.pdf](#)
4. [23-09-A_ESA_Signed Agreement.pdf](#)

FISCAL IMPACT: \$189,016.00

BUDGET INFORMATION: Budgeted / Engineering - Sales Tax Program

RESOLUTION NO. _____

**A RESOLUTION AUTHORIZING AN ENGINEERING SERVICES
AGREEMENT FOR THE FREE FERRY ROAD AND ALBERT PIKE AVENUE
INTERSECTION IMPROVEMENTS
PROJECT NO. 23-09-A**

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE CITY OF FORT SMITH,
ARKANSAS, THAT:

SECTION 1: The Mayor, his signature being attested by the City Clerk, is authorized to execute the engineering services agreement with Mickle Griffin, LLC, for the design of the Free Ferry Road and Albert Pike Avenue Intersection Improvements, Project No. 23-09-A, in the not to exceed amount of \$189,016.00.

SECTION 2: Payment for engineering services authorized by Section 1 is hereby authorized from the Sales Tax Fund (1105).

This resolution adopted this _____ day of August, 2023.

APPROVED:

Mayor

ATTEST:

City Clerk

Approved as to Form

Jerry Confield

No Publication Required



2023 CAPITAL IMPROVEMENTS PROGRAM
 ALBERT PIKE AVE AND FREE FERRY RD
 INTERSECTION IMPROVEMENTS



Project:	23-09-A
Date:	AUG. 2023
Scale:	NONE
Drawn By:	RBR

ENGINEERING CONSULTANT SELECTION - 2023 CAPITAL IMPROVEMENTS PROGRAM

Project No.	Description	Selected Firm	Qualified Firm	Qualified Firm
23-09-A	Intersection Improvements - Albert Pike Avenue and Free Ferry Road	Mickle Griffin	Garver	McClelland

Determination of the selected firm based upon review of consultant qualifications statements on file in the City Clerk's office, considering experience with respect to the type of services required, capacity and capability to perform the work, past record of performance and familiarity with the area in which the project is located.

Stan Snodgrass

Name

Matt Meeker

Name

AGREEMENT
BETWEEN
CITY OF FORT SMITH, ARKANSAS
AND
Mickle Griffin, LLC
FOR
PROFESSIONAL SERVICES

THIS IS AN AGREEMENT made as of _____ between the City of Fort Smith, Arkansas, 623 Garrison Avenue, P.O. Box 1908, Fort Smith, Arkansas 72902 (OWNER) and Mickle Griffin, LLC, PO Box 8130, Fort Smith, Arkansas 72902 (ENGINEER).

OWNER intends to construct intersection improvements where Free Ferry and Albert Pike intersect, identified as the “Ferry Ferry and Albert Pike Intersection Improvements Project, Project No. 23-09-A and more specifically described and outlined in Exhibit “B” (hereinafter called the Project).

In consideration of their mutual covenants herein agree in respect of the performance of professional engineering services by ENGINEER and the payment for those services by OWNER as set forth below, ENGINEER shall provide professional engineering services for OWNER in all phases of the Project to which this Agreement applies, serve as OWNER’s professional engineering representative for the Project as set forth below and shall give professional engineering consultation and advice to OWNER during the performance of services hereunder.

SECTION 1 - BASIC SERVICE OF ENGINEER

1.1 General.

ENGINEER shall:

- 1.1.1. Perform professional services, as herein stated.
- 1.1.2. Consult with OWNER to define and clarify OWNER's requirements for the Project and available data.
- 1.1.3. Advise OWNER as to the necessity of OWNER's providing data or services of the type described in SECTION 3 which are not part of ENGINEER'S Basic Services, and assist OWNER in obtaining such data and services.
- 1.1.4. Identify, consult with, and analyze requirements of governmental authorities, if any, having jurisdiction to approve the Project, or portions thereof.
- 1.1.5 Arrange access to and make provisions to enter upon public and private property for ENGINEER to perform his services.

1.2 Concept Design Phase.

1.2.1. After written authorization to proceed with the Concept Design Phase, ENGINEER shall:

- 1.2.1.1. Develop a program for subsurface investigations and material testing and submit to OWNER for approval. Upon approval of program, conduct subsurface investigations including borings, subsurface explorations, sampling, laboratory and field tests, and professional interpretation of all of the foregoing subsurface data.
- 1.2.1.2. Perform all field surveys necessary for the design of the Project, including but not limited to cross-sections, topographic, utility, property, boundary, easement and right-of-way surveys.
- 1.2.1.3. Identify and evaluate alternate solutions available to OWNER and, after consultation with OWNER, recommend to OWNER those solutions which in ENGINEER's judgment meet OWNER's requirements for the Project.
- 1.2.1.4. Prepare a Report which will, as appropriate, contain schematic layouts, conceptual design criteria, and conceptual plans to indicate the agreed-to requirements, considerations involved, and those alternate solutions available to

OWNER which ENGINEER recommends. Concept plan documents will consist of topographic base sheets showing existing conditions, proposed concept plans, sections and details as outlined in Exhibit A "Further Description of Basic Engineering Services and Related Matters". This report will be accompanied by ENGINEER's opinion of Total Project Costs for each solution recommended for the Project with each component separately itemized, including the following: opinion of probable Construction Cost, allowances for contingencies and for the estimated total costs of design, professional, and other related services provided by ENGINEER.

1.2.1.5. Furnish three copies of the concept plans and documents and present and review them in person with OWNER.

1.2.2. The duties and responsibilities of ENGINEER during the Concept Design Phase are amended and supplemented as indicated in Exhibit A "Further Description of Basic Engineering Services and Related Matter".

1.2.3. ENGINEER's services under the Concept Design Phase shall each be considered complete at the earlier of (1) the date when the submissions have been approved by OWNER or (2) thirty days after the date when submissions are delivered to OWNER for approval. The services will be completed and the data submitted within the stipulated period indicated in Exhibit A "Further Description of Basic Engineering Services and Related Matters" after authorization to proceed with services.

1.3 Preliminary Design Phase

1.3.1. After written acceptance by OWNER of the Report and Concept plans, selection by OWNER of a recommended solution, indication of any specific modifications or changes in the extent of the Project desired by OWNER, and upon written authorization from OWNER to proceed with Preliminary Design Phase, Engineer shall:

1.3.1.1. On the basis of the above selection of a recommended solution and specified modifications, prepare preliminary design documents consisting of final design criteria, preliminary drawings, outline specifications, special conditions and design data.

1.3.1.2. Where additional right-of-way is required, prepare right-of-way plans with sufficient details and dimensions to allow Owner to evaluate proposed easements and right-of-way.

1.3.1.3. Based on the information contained in the preliminary design documents, submit a revised opinion of probable Project Costs.

1.3.1.4. Furnish three copies & one reproducible set of the above preliminary

design documents and present and review them in person with OWNER.

1.3.2. The duties and responsibilities of ENGINEER during the Preliminary Design Phase are amended and supplemented as indicated in Exhibit A "Further Description of Basic Engineering Services and Related Matter".

1.3.3. ENGINEER's services under the Preliminary Design Phase shall each be considered complete at the earlier of (1) the date when the submissions for that phase have been approved by OWNER or (2) thirty days after the date when such submissions are delivered to OWNER for final approval, plus such additional time as may be considered reasonable for obtaining approval of governmental authorities, if any, having jurisdiction over design criteria applicable to the Project. The services will be completed and the data submitted within the stipulated period indicated in Exhibit A "Further Description of Basic Engineering Services and Related Matters" after authorization to proceed with services.

1.4 Final Design Phase.

1.4.1. After written acceptance by OWNER of the Preliminary Design Phase documents and revised opinion of probable Project Cost, indicating any specific modifications or changes in the extent of the Project desired by OWNER, and upon written authorization from OWNER to proceed with Final Design Phase, ENGINEER shall:

1.4.1.1. On the basis of the approved preliminary design documents, with indicated modifications, and the opinion of probable Project Cost, prepare for incorporation in the Contract Documents final drawings to show the character and extent of the Project (hereinafter called "Drawings") and Specifications.

1.4.1.2. Furnish to OWNER such documents and design data as may be required for, and assist in the preparation of, the required documents so that OWNER may apply for approvals of such governmental authorities, if any, as have jurisdiction over design criteria applicable to the Project, and assist in obtaining such approvals by participating in submissions to and negotiations with appropriate authorities.

1.4.1.3. Revise and/or finalize right-of-way plans with sufficient details and dimensions. Prepare legal descriptions for Easements or Right-of-ways.

1.4.1.4. Advise OWNER of any adjustments to the latest opinion of probable Project Cost caused by changes in extent or design requirements of the Project or Construction Costs and furnish a revised opinion of probable Project Cost based on the Drawings and Specifications.

1.4.1.5. Utilizing standard Owner forms, prepare for review and approval by OWNER, its legal counsel and other advisors, bid forms, Special Conditions and Drawings for the Project construction Contract. Engineer shall assist in the

preparation of other related documents.

1.4.1.6. Furnish three copies & one reproducible set of the full-size plans and one reproducible set of the reduced-sized plans and present and review them in person with OWNER.

1.4.2. The duties and responsibilities of ENGINEER during the Final Design Phase are amended and supplemental as indicated in Exhibit A "Further Description and Basic Engineering Services and Related Matters".

1.4.3. ENGINEER's services under the Final Design Phase shall each be considered complete at the earlier of (1) the date when the submissions for that phase have been approved by OWNER or (2) thirty days after the date when such submissions are delivered to OWNER for final approval, plus such additional time as may be considered reasonable for obtaining approval of governmental authorities, if any, having jurisdiction over design criteria applicable to the Project. The services will be completed and the data submitted within the stipulated period indicated in Exhibit A "Further Description of Basic Engineering Services and Related Matters" after authorization to proceed with services.

1.5 Bidding or Negotiating Phase.

1.5.1. After written approval by OWNER of the ENGINEER's Drawings, Specifications and other Final Design Phase documentation including the most recent opinion of probable Project Cost and upon written authorization to proceed, ENGINEER shall:

1.5.1.1. Attend Pre-Bid conference, if any.

1.5.1.2. Upon request by OWNER, provide interpretation to OWNER of bid forms, plans and Special Conditions in response to questions by CONTRACTORS. Provide additional data and assist in preparation of Addenda, as appropriate to clarify, correct, or change the Bidding documents, for issuance by OWNER prior to receipt of construction bids.

1.5.1.3. Attend the bid opening.

1.5.1.4. Consult with and advise OWNER as to the acceptability of subcontractors and other persons and organizations proposed by the prime contractor(s) (hereinafter called "Contractor(s)") for those portions of the work as to which such acceptability is required by the bidding documents.

1.5.1.5. Assist OWNER in evaluating bids or proposals and in assembling and awarding contracts.

1.5.2. The duties and responsibilities of ENGINEER during the Bidding or Negotiating

Phase are amended and supplemented as indicated in Exhibit A "Further Description of Basic Engineering Services and Related Matters".

1.5.3. This Phase shall terminate and the services to be rendered thereunder shall be considered complete upon commencement of the Construction Phase or upon cessation of the negotiations with prospective Contractor(s).

1.6 Construction Phase.

1.6.1. The Construction Phase will commence with the execution of the first prime contract for the work of the Project or any part thereof, and will terminate upon the latter of submittal of completed Record Drawings or approval by OWNER of final payment on the last prime contract to be completed. Construction Phase services may be rendered at different times in respect of separate prime contracts if the Project involves more than one prime contract. During the Construction Phase ENGINEER shall:

1.6.1.1. Participate in Pre-Construction conference prior to commencement of construction.

1.6.1.2. Upon request by OWNER, consult with and advise OWNER on matters described in the Contract Documents.

1.6.1.3. Erect or install sufficient control monuments, reference points and base lines to enable the Contractor(s) to proceed with the layout of the work.

1.6.1.4. Upon request by OWNER, consult and advise OWNER on necessary clarifications and interpretations of the Plans and Special Conditions as appropriate to the orderly completion of Contractor's work. Such clarifications and interpretations will be consistent with the intent of and reasonably inferable from the Plans and Special Conditions.

1.6.1.5. Attend Project meetings as requested by OWNER, and make visits to the site at intervals appropriate to the various stages of construction to observe as an experienced and qualified design professional the progress and quality of the executed work of Contractor(s) and to determine in general if such work is proceeding in accordance with the Contract Documents. ENGINEER shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of such work. ENGINEER shall not be responsible for the means, methods, techniques, sequences or procedures of construction selected by Contractor(s) or the safety precautions and programs incident to the work of Contractor(s). ENGINEER'S efforts will be directed toward providing a greater degree of confidence for OWNER that the completed work of Contractor(s) will

conform to the Contract Documents, but ENGINEER shall not be responsible for the failure of Contractor(s) to perform the work in accordance with the Contract Documents. During such visits and on the basis of on-site observations ENGINEER shall keep OWNER informed of the progress of the work, shall endeavor to guard OWNER against defects and deficiencies in such work and inform the OWNER of work failing to conform to the Contract Documents. The ENGINEER shall maintain a log of the site visits showing date, time of arrival and departure, purpose of the visit, and the person contacted (inspector, contractor, superintendent, etc.). A copy of the log shall be provided monthly to the OWNER.

1.6.1.6. Review and approve (or take the appropriate action in respect of) Shop Drawings (as that term is defined in the Standard Specifications) and samples, the results of tests and inspections and other data which each Contractor is required to submit, but only for conformance with the design concept of the Project and compliance with the information given to the Contract Documents (but such review and approval or other action shall not extend to means, methods, sequences, techniques or procedures of construction or to safety precautions and programs incident thereto); and determine the acceptability of substitute materials and equipment proposed by Contractor(s).

1.6.1.7. In conjunction with OWNER, conduct both an inspection to determine if the Project is substantially complete and a final inspection to determine if the work has been completed in accordance with the Contract Documents to the best of the ENGINEER's knowledge and based upon the extent of the services provided by ENGINEER under this agreement.

1.6.2. ENGINEER shall not be responsible for the acts or omissions of any Contractor, or subcontractor, or any of the Contractor(s)' or subcontractors' agents or employees or any other persons (except ENGINEER's own employees and agents) at the site or otherwise performing any of the Contractor(s)' work; however, nothing contained in paragraphs 1.6.1.1 through 1.6.1.7, inclusive, shall be construed to release ENGINEER from liability for failure to properly perform duties undertaken by him as required by this Agreement or in the Contract Documents.

1.6.3. The duties and responsibilities of ENGINEER during the Construction Phase are amended and supplemented as indicated in Exhibit A "Further Description of Basic Engineering Services and Related Matters".

SECTION 2 - ADDITIONAL SERVICES OF ENGINEER

2.1 General

If authorized in writing by OWNER, ENGINEER shall furnish or obtain from others Additional Services of the following types which are not considered normal or customary for Basic Services except to the extent provided otherwise in Exhibit A "Further Description of Basic Engineering Services and Related Matters". These services will be paid for by OWNER as indicated in Section 5.

2.1.1. Preparation of applications and supporting documents for governmental grants, loans or advances in connection with the Project; preparation or review of environmental assessments and impact statements; review and evaluation of the effect on the design requirements of the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

2.1.2. Services resulting from significant change in scope, extent, and character of the Project or its design including, but not limited to, changes in size, complexity, OWNER'S schedule, or character of construction; and revising previously accepted studies, reports, design documents or Contract Documents when such revisions are due to causes beyond ENGINEER'S control.

2.1.3. Services resulting from the award of additional prime contracts for construction of the project.

2.1.4. Additional or extended services during construction made necessary by (1) work damaged by fire or other cause during construction, (2) a significant amount of defective or neglected work of Contractor(s), (3) prolongation of the contract time of any prime contract by more than sixty days, (4) acceleration of the progress schedule involving services beyond normal working hours, and (5) default by Contractor(s).

2.1.5. Services after completion of the Construction Phase, such as inspections during any guarantee period and reporting observed discrepancies under guarantees called for in any contract for the Project.

2.1.6. Preparing to serve or serving as a consultant or witness for OWNER in any litigation, public hearing or other legal or administrative proceeding involving the Project (except as agreed to under Basic Services).

2.1.7. Providing assistance in resolving any Hazardous Environmental Condition in compliance with current Laws and Regulations.

2.1.8. Furnishing services of ENGINEER's Consultants for other than Basic Services.

2.1.9. Additional services in connection with the Project, including services normally furnished by OWNER and services not otherwise provided for in this Agreement.

SECTION 3 - OWNER'S RESPONSIBILITIES

OWNER shall:

3.1. Provide criteria and information as to OWNER's requirements for the Project, including design objectives and constraints, right-of-way, capacity and performance requirements, and any budgetary limitation; furnish copies of design and construction standards which OWNER will require Project to be designed in accordance with; and furnish Special Conditions template which Engineer will be required to modify to meet the specific needs of the Project.

3.2. Assist ENGINEER by making reasonably available for Engineer's use all available information pertinent to the Project including previous reports and any other data relative to design or construction of the Project.

3.3. Furnish to ENGINEER, as required for performance of ENGINEER's Basic Services (except to the extent provided otherwise in Exhibit A "Further Description of Basic Engineering Services and Related Matters"), data prepared by or services of others, including hydrographic surveys, environmental assessment and impact statements, property descriptions, zoning, deed and other land use restriction and other special data or consultations not covered in Section 2.

3.4 This section deleted and moved to Section 1.1.5.

3.5. Examine all studies, reports, sketches, Drawings, Specifications, proposals and other documents presented by ENGINEER, obtain advice of an attorney, insurance counselor and other consultants as OWNER deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of ENGINEER.

3.6. Furnish approvals and permits from all governmental authorities, if any, having jurisdiction over the Project and such approvals and consents from others, if any, as may be necessary for completion of the Project.

3.7. Provide such accounting, independent cost estimating and insurance counseling services as may be required for the Project, such legal services as OWNER may require or ENGINEER may reasonably request with regard to legal issues pertaining to the Project including any that may be raised by Contractor(s), such auditing service as OWNER may require to ascertain how or for what purpose any Contractor has used the moneys paid to him under the construction contract, and such inspection services as OWNER may require to ascertain that Contractor(s) are complying with any law, rule or regulation applicable to their performance of the Work.

3.8. Designate in writing a person to act as OWNER's representative with respect to the services to be rendered under this Agreement. Such person shall have complete authority to transmit instructions, receive information, render decisions relative to the Project (except time and

compensation issues under this Agreement and any Project construction Contract), and interpret and define OWNER's policies and decisions with respect to materials, equipment, elements and systems pertinent to ENGINEER's services.

3.9. Give prompt written notice to ENGINEER whenever OWNER observes or otherwise becomes aware of any development that affects the scope or timing of ENGINEER's services or any defect in the work of Contractor(s).

3.10. Furnish, or direct ENGINEER to provide, necessary Additional Services as reasonably stipulated in Section 2 of this Agreement or other services as required.

3.11. Bear all costs incident to compliance with the requirements of this Section 3.

3.12. Prepare Easement or Right-of-Way Deeds for and obtain additional rights-of-way required for the Project unless that service is identified as an Engineer basic service under Section 1.

3.13. Compile and print contract documents, specifications and construction plans; prepare and publish an Advertisement for Bids; receive, publicly open and read construction and testing services bids; evaluate bids; evaluate bidders and subcontractors with reference to qualifications and ability to perform the work; prepare a bid tabulation summary; prepare bid summary, resolutions and other related legal documents to present to the OWNER's governing body for approval of construction and testing contracts.

3.14. Compile contracts, bonds, certificates of insurance and other related contractual documents for review by the OWNER's legal counsel and execution by the appropriate parties.

3.15. Schedule and conduct the pre-construction conference and issue the construction notice to proceed.

3.16. Provide a full-time Resident Project Representative assigned to the project for the duration of the construction.

3.17. Prepare and obtain execution of periodic construction pay estimates, change orders, field change orders, final pay estimates and related documents.

3.18. Provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of Samples and materials required by the Contract Documents during the Construction Phase with professional interpretation thereof.

SECTION 4 - PERIOD OF SERVICE

4.1 The provisions of this Section 4 and the various rates of compensation for ENGINEER's services provided for elsewhere in this Agreement have been agreed to in anticipation of the orderly and continuous progress of the Project. ENGINEER's obligation to render services hereunder will extend for a period which may reasonably be required for the design, award of contracts and construction of the Project including extra work and required extensions thereto.

4.2 If OWNER has requested significant modifications or changes in the extent of the Project, the time of performance of ENGINEER's services and his various rates of compensation may be adjusted appropriately.

4.3 If OWNER fails to give reasonably prompt written authorization to proceed with any phase of services after completion of the immediately preceding phase, or if the Construction Phase has not commenced within 180 calendar days after completion of the Final Design Phase, ENGINEER may request that his services be suspended under this Agreement.

4.4 If ENGINEER's services for design or during construction of the Project are delayed or suspended in whole or in part by OWNER for more than three months for reasons beyond ENGINEER's control, ENGINEER shall, on written request to OWNER (but without termination of this Agreement), be paid as provided in paragraph 5.3. If such delay or suspension extends for more than one year for reasons beyond ENGINEER's control, or if ENGINEER for any reason is required to render services more than one year after Substantial Completion, the various rates of compensation provided for in Exhibit C "Engineer's Hourly Rates" of this Agreement shall be subject to renegotiation.

4.5 In the event that the work designed or specified by ENGINEER is to be performed under more than one prime contract, OWNER and ENGINEER shall, prior to commencement of the Final Design Phase, develop a schedule for performance of ENGINEER's services during the Final Design, Bidding or Negotiating and Construction Phases in order to sequence and coordinate properly such services as applicable to the work under such separate contracts. This schedule is to be prepared whether or not the work under such contracts is to proceed concurrently.

SECTION 5 - PAYMENT TO ENGINEER

5.1 Methods of Payment for Services and Expenses of ENGINEER.

5.1.1. For Basic Services. OWNER shall pay ENGINEER for Basic Services rendered under Section 1 (except as amended and supplemented by Exhibit A "Further Description of Basic Engineering Services and Related Matters") an amount equal to the cumulative hours charged to the Project for each class of ENGINEER's employees times ENGINEER's Hourly Rates as shown on the attached Exhibit C, "Engineer's Hourly Rates" for services rendered by principals and employees assigned to the Project, plus approved Reimbursable Expenses and ENGINEER's Consultant charges, if any. For ENGINEER's Consultant charges the OWNER shall pay the ENGINEER the amount billed to the ENGINEER times a factor of 1.00. The maximum payment to the ENGINEER for Basic Services and Reimbursable Expenses under this Agreement shall not exceed \$189,016.00.

5.1.1.1. Payment Schedule. Payment for a specific phase shall not exceed the following scheduled amount prior to completion of that phase:

Concept Design Phase (Sec.1.2)	<u>\$26,160.00</u>
Preliminary Design Phase (Sec. 1.3)	<u>\$51,021.00</u>
Final Design Phase (Sec. 1.4)	<u>\$28,366.00</u>
Engineering Design Subtotal	<u>\$105,547.00</u>
Bidding or Negotiating Phase (Sec. 1.5) and Construction Phase (Sec. 1.6)	<u>\$19,093.00</u>
Right-of-way (Exhibit A)	<u>\$38,876.00</u>
Reimbursables (Sec. 5.4.2)	<u>\$25,500.00</u>
Total Contract Amount	<u>\$189,016.00</u>

5.1.2. For Additional Services. Any and all Additional Services must be approved, and maximum amount to be paid for said services agreed to, in writing by OWNER prior to rendering of same. OWNER shall pay ENGINEER for Additional Services rendered under Section 2 as follows:

5.1.2.1. General. For services of ENGINEER's employees engaged directly on the

Project pursuant to paragraphs 2.1.1 through 2.1.9, an amount equal to the cumulative hours charged to the Project by each class of ENGINEER's employees time Hourly Rates as shown on the attached Exhibit C, "Engineer's Hourly Rates", with the maximum amount paid not to exceed the amount approved by OWNER.

5.1.2.2. Special Consultants. For services and reimbursable expenses of special consultants employed by ENGINEER pursuant to paragraph 2.1.8, the amount billed to ENGINEER therefor times a factor of 1.00.

5.1.2.3. Serving as a Witness. For the services rendered by principals and employees as consultants or witnesses in any litigation, hearing or proceeding in accordance with paragraph 2.1.6, at the Hourly Rates as shown on the attached Exhibit C, "Engineer's Hourly Rates". Compensation for time spent in preparing to appear in any such litigation, hearing or proceeding will also be the Hourly Rates as shown on the attached Exhibit C, Engineer's Hourly Rates".

5.1.3. For Reimbursable Expenses. In addition to payments provided for in paragraphs 5.1.1 and 5.1.2, OWNER shall pay ENGINEER the actual costs of Reimbursable expenses incurred in connection with Basic and Additional Services. Reimbursable Expenses must be approved in writing by the OWNER prior to the incurrence of such expenses.

5.1.4. The terms "Hourly Rates" and "Reimbursable Expenses" will have the meanings assigned to them in paragraph 5.4.

5.2 Times of Payment.

ENGINEER shall submit statements no more frequently than monthly for Basic and Additional Services rendered in an amount based on ENGINEER's Hourly Rates as shown on the attached Exhibit C, "Engineer's Hourly Rates" for principals and employees assigned to the Project and for Reimbursable Expenses incurred. When requested by OWNER, the monthly statements shall be accompanied by a copy of the time sheets for all personnel working on the project. OWNER shall make payment of approved amounts within 60 days after receipt of the statements.

5.3 Other Provisions Concerning Payments.

In the event of termination by OWNER under Section 6 during any phase or task of the Basic Services, progress payments due ENGINEER for services rendered to the date of termination shall constitute total payment for Engineer's services. In the event of any such termination, ENGINEER will be paid for all unpaid approved Additional Services and unpaid approved Reimbursable Expenses through the effective date of termination.

5.4 Definitions.

5.4.1. The Hourly Rates used as a basis for payment mean salaries and wages (basic and incentive) paid to all personnel engaged directly on the Project, including, but not limited to, engineers, architects, surveyors, designers, draftsmen, specification writers, estimators, other technical personnel, stenographers, typists and clerks; plus the cost of customary and statutory benefits including, but not limited to, social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto; plus operating margin or profit, non-project operating costs, and all general and administrative overhead costs, including, but not limited to, furnishing and maintaining office facilities, furniture, utilities, vehicles, equipment.

5.4.2. Reimbursable Expenses mean the actual expenses incurred directly or indirectly in connection with the Project for: (1) printing and reproduction costs in excess of that specified in Section 1; and (2) utility line excavation and backfill, if any. Any and all expenditures for Reimbursable Expenses must be approved in writing by the OWNER prior to rendering or obtaining same. Additionally, the following items, not all inclusive, are not considered Reimbursable Expenses: mileage and transportation, subsistence, toll telephone calls, postage and overtime salary costs.

SECTION 6 - SUSPENSION AND TERMINATION

6.1 Suspension and Termination

A. Suspension.

By Owner: Owner may suspend services under this Agreement upon seven days written notice to Engineer.

By Engineer. If Engineer's services are substantially delayed through no fault of Engineer, Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement.

B. Termination. The obligation to provide further services under this Agreement may be terminated:

1. For convenience, with or without cause by the Owner's absolute sole discretion, by Owner effective upon Engineer's receipt of written notice from Owner.

2. For cause,

a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

b. Notwithstanding the foregoing, this Agreement will not terminate under paragraph 6.1.B.2.a. if the party receiving such notice begins, within seven days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

C. Effective Date of Termination. The terminating party under paragraph 6.1.B. may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

SECTION 7 – GENERAL CONSIDERATIONS

7.1 Use of Documents.

7.1.1 All Documents including Drawings and Special Conditions prepared by ENGINEER pursuant to this Agreement are instruments of service in respect of the Project. Owner may make and retain copies of Documents for information and reference in connection with use on the Project by Owner. They are not intended or represented to be suitable for reuse by OWNER or others on extensions of the Project or on any other project. Any reuse without written verification or adaptation by ENGINEER for the specific purpose intended will be at OWNER's sole risk and without liability or legal exposure to ENGINEER.

7.1.2. Copies of documents and furnished data that may be relied upon by recipient of said documents and data are limited to the printed copies (also known as hard copies) that are delivered. Files in electronic media format of text, data, graphic, or of other types are only for convenience of recipient. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

7.2 Controlling Law and Venue.

This Agreement is to be governed by the law of the State of Arkansas. The venue for any action between Owner and Engineer related to the Project or this Agreement shall be in the Circuit Court of Sebastian County, Arkansas.

7.3 Successors, Assigns, and Beneficiaries.

A. Owner and Engineer each is hereby bound and the partners, successors, executors, administrators and legal representatives of Owner and Engineer (and to the extent permitted by paragraph 7.3.B, the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.

B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

C. Unless expressly provided otherwise in this Agreement:

1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Contractor, Contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.

7.4 Access To Records.

The ENGINEER and any Subcontractors are to maintain all documents, accounting records and other evidence pertaining to cost incurred and to make such materials available at their respective offices at all reasonable times during the term of this Agreement or any construction contract period, and for three (3) years from the date of final payment under this Agreement or any construction contract, for inspection by authorized representatives of the OWNER, or any governmental agency providing any portion of project funding, and copies thereof shall be furnished, if requested.

7.5 Standards of Performance

7.5.1 The standard of care for all professional engineering and related services performed or furnished by ENGINEER under this Agreement will be the care and skill ordinarily used by members of ENGINEER's profession practicing under similar circumstances. ENGINEER shall be responsible for the technical accuracy of its services and documents resulting therefrom, and OWNER shall not be responsible for discovering deficiencies therein. ENGINEER shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in OWNER-furnished information.

7.5.2 Engineer shall not be required to sign any documents, no matter by whom requested, that would result in the Engineer having to certify, guarantee, or warrant the existence of conditions whose existence the Engineer cannot ascertain. Owner agrees not to make resolution of any dispute with the Engineer or payment of any amount due to the Engineer in any way contingent upon the Engineer signing any such documents.

7.6 Insurance

7.6.1 Engineer shall procure and maintain insurance as set forth below. Engineer shall cause Owner to be listed as an additional insured on any applicable general liability insurance policy carried by Engineer. Engineer shall each deliver to the Owner certificate(s) of insurance evidencing the coverages indicated. Such certificate(s) shall be

furnished prior to commencement of Engineer's services and at renewals thereafter during the life of this Agreement.

7.6.2. Engineer's insurance shall include the designated types and coverage limits:

7.6.2.a Workers' Compensation – Limits as required by controlling law;

7.6.2.b Professional liability - Each claim made and annual aggregate limit of not less than \$1 Million;

7.6.2.c Automobile liability - Each claim made and annual aggregate limit of not less than \$1 Million;

7.6.2.d General liability - Each claim made and annual aggregate limit of not less than \$1 Million.

7.7 Indemnification.

7.7.1 To the fullest extent permitted by law, Engineer shall indemnify and hold harmless Owner and its agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of this Agreement, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Engineer, anyone directly or indirectly employed by the Engineer or anyone for whose acts the Engineer may be liable, regardless of whether or not it is caused in part by Owner.

7.8 Waiver. Non-enforcement of any provision by either party shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

7.9 Notices. Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by email, by facsimile, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

7.10 Survival. All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.

7.11 Severability. Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Engineer, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable

provision that comes as close as possible to expressing the intention of the stricken provision.

7.12 Counterparts and Electronic Signatures. This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument. The facsimile, email or other electronically delivered signatures of the parties shall be deemed to constitute original signatures, and facsimile or electronic copies hereof shall be deemed to constitute duplicate originals. Signatures delivered by facsimile, email or other electronic means shall bind the signatory notwithstanding any subsequent failure or refusal to deliver an original signature signed in ink.

SECTION 8 - EXECUTION

8.1 This Agreement (consisting of pages 1 through 21, inclusive), together with the Exhibits and schedules identified above constitute the entire agreement between OWNER and ENGINEER and supersede all prior written or oral understandings. This Agreement and said Exhibits and schedules may only be amended, supplemented, modified or canceled by a duly executed written instrument.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

Owner:

City of Fort Smith, Arkansas

By: _____

Title: Mayor

Date Signed: _____

Address for giving notices:

City of Fort Smith
C/O Stan Snodgrass, Engineering Director

Engineer:

Mickle Griffin, LLC

By: 

Title: President

Date Signed: 08/04/2023

Engineer License or Certificate No. 4292
State of: Arkansas

Address for giving notices:

Mickle Griffin, LLC
C/O Nicholas J. Griffin, P.E.

P.O. Box 1908
623 Garrison Ave., Rm 409
Fort Smith, AR 72902

Designated Representative (see Section 3.8):

Title: _____

Phone Number: _____

Facsimile Number: _____

E-Mail Address: _____

3434 Country Club Avenue
Fort Smith, Arkansas 72903

Designated Representative (see Section 3.8):

Nicholas J. Griffin, P.E.

Title: Vice President

Phone Number: 479-649-8484

Facsimile Number: 479-649-8486

E-Mail Address: ngriffin@micklegriffin.com

EXHIBIT A
“Further Description of Basic Engineering Services and Related Matters”
Free Ferry & Albert Pike Intersection Improvements
Fort Smith, Arkansas
Project No. 23-09-A
August 04, 2023

A. SCOPE OF SERVICES

The Intersection Improvements project includes design of an improved intersection layout where Free Ferry and Albert Pike intersect. The project limits are the intersection and the immediate vicinity, depicted in Exhibit B.

In June 2023 and at the City’s request, the traffic design consultant TEC published its findings indicating that the current intersection operates at overall acceptable levels-of-service “C”. TEC recommended improvements to the intersection design to improve performance to overall acceptable levels-of-service “A”.

This project includes preliminary design, coordination of right of way easements, detail design, preparation of construction plan set, and construction bid letting.

1. Topographic Surveys
 - a. Establish base line (with references) along existing roadway. Set monuments on centerline at 400 foot intervals and, if necessary, at intervisible points between, with a minimum of 2 monuments per site. Survey control shall be established on the City Fort Smith Coordinate System.
 - b. Locate all structures, streets, driveways, storm drains and other features within 75 feet of centerline plus additional structures from parcels from which acquisition will be made.
 - c. Cross section centerline at 50 foot intervals, plus breaks, for a width of 150 feet to define existing conditions. Cross section intersecting streets for the lengths designated for inclusion in the project.
 - d. Profile existing driveways.
 - e. Cross section areas in the vicinity of drainage channels. Determine flowline elevations of all drainage facilities (pipes, inlets, ditches, etc.).
 - f. Set temporary bench marks at approximately 1,000 foot intervals.
 - g. All surveys to be performed to a minimum of third order accuracy.
2. Right-of-Way Surveys
 - a. Owner will provide ownership information for properties along project route including copies of recorded plats, legal descriptions for unplatted tracts and easements.
 - b. Perform field surveys to determine existing monumentation and establish land lines, ownership lines, rights-of-way and easements.

- c. Reference existing monuments for replacement after construction.
 - d. Stake proposed right-of-way and easements at intervals which will provide intervisible points for appraisal and acquisition purposes. Larger tracts shall be staked at property lines and at intervisible points. A full restaking of right-of-way and easements shall be completed for acquisition and/or construction purposes.
 - e. All surveys and related right-of-way work shall conform to the Arkansas Minimum Standards for Property Boundary Surveys and Plats, Revised May 21, 2009.
 - f. Survey control shall be based on the City of Fort Smith State Plan Coordinate System.
3. Right-of-Way Acquisition Coordination
- a. Support City's anticipated easements and fee-based Right-of-Way acquisition by:
 - (1) Coordinating historic title and deed review, up to 4 years of history.
 - (2) Preparing exhibits for land owner review.
 - (3) Preparing legals for land acquisition.
 - (4) Meeting directly with land owners to discuss proposed project scope, preliminary design, intended impacts to the properties, and proposed ROW acquisition.
 - (5) Coordinating Land Value Appraisals of subject properties (assumed 4).
 - (6) Provide legal descriptions, appraisals, and proposed acquisition fee to City Attorney and Staff to prepare the deed and easement documents for Board approval.
4. Utility Surveys and Coordination
- a. Obtain location and size of existing overhead and underground utilities from the utility companies.
 - b. Field locate utilities within the project area. Where conflicts with new construction will occur, determine elevations of existing utilities by excavation methods.
 - c. Using utility field survey data, plot existing utilities on plans.
 - d. Attend meetings with each affected utility company to discuss necessary adjustments or relocations and later to discuss their methods and schedule to accomplish the work. A City representative will arrange all meetings with utility companies.
 - e. Review utility adjustment plans and costs with City to determine most feasible combination of street and drainage construction and/or utility relocation to be utilized. Prepare construction plans as directed by City to accommodate utility relocations, including identification of utility easements on right-of-way plans. Final plans shall indicate the location and extent of proposed utility relocations.
5. Traffic Study
- a. Review data from Owner-furnished traffic study report and ensure compliance with applicable design standards.
 - b. Provide analysis and recommendations for traffic loadings for pavement thickness

- design.
 - c. Evaluate alternate construction phasing and routes for maintenance of traffic and provide recommendations for each alternative.
- 6. Geotechnical Investigations
 - a. Perform geotechnical investigations in accordance with City of Fort Smith criteria.
 - b. Perform sampling of subgrade soils by boring and excavation of test pits. A minimum of one boring or test pit shall be provided for every 400 lineal feet of street, and locations of structures. A test pit shall be completed for every 4 borings taken. For road widening projects, a portion of the tests shall be taken in ditchlines, or adjacent thereto, over which pavement structure may be constructed.
 - c. Perform soil tests providing data regarding soils unit weight, moisture contents, moisture density curves, chemical composition, gradations, plasticity, and soil classifications among other appropriate tests, including tests for suspected hazardous substances, for each sample. Soil classifications and plasticity to be completed on each type of soil encountered in each boring for depths between subgrade to 10' below. Determine if an impervious soil layer exists (and depth thereto) which would inhibit or prevent free drainage of subgrade soils.
 - d. From soil samples, determine locations for further sampling (anticipate fill areas and inadequate soil removal areas are to be excluded) for load bearing strength (CBR) tests. CBR tests are to be done on representative subgrade soils.
 - e. After establishment of final profile grades, review soil data to determine the adequacy of the in-situ soils as a pavement subgrade assuming wet weather conditions and construction season. Make recommendations as to anticipated soil conditions and reactions to be encountered, amount of undercut to be required, utilization of geotextile/geogrid materials for stabilization, and/or other construction methods or materials to achieve a stable subgrade.
 - f. Analyze the data, develop recommendations for structural foundations, slope stability, excavations, embankments, pavement geotechnical investigations not listed above, and pavement designs, and prepare a geotechnical report for the Project.
- 7. Conceptual Design Phase -
 - a. Prepare plan and profile drawings showing all existing facilities. Horizontal scale of drawings to be 1 inch equals 40 feet or larger and vertical scale to be 1 inch equals 5 feet.
 - b. Prepare plans and data including the following information:
 - (1) Survey data, centerline and stations, existing improvements, boring locations, bench marks, existing and proposed right-of-way, temporary construction easements and structures.
 - (2) Proposed centerline, pavement configuration, and profile grades for streets. Identify sidewalk locations.

- (3) Establish typical pavement sections including alternate designs.
- (4) Soils boring information including existing pavement sections. Soils laboratory data, including CBR tests, are not required in the concept phase.
- (5) Drainage information on concept plans shall include approximate location, size and type of structures and storm drain systems. A drainage area map shall be furnished. Preliminary hydrology data shall include runoff quantities for the 10, 25, 50 and 100 year design storms. Owner will provide storm water data, as available, for primary drainageways.
- (6) Identify proposed traffic signal locations and type of signals.
- (7) Prepare cost estimates for primary and alternate designs including unit cost and total cost of alternate roadway and pavement sections.
- (8) Identify water and sanitary sewer facilities requiring relocation.
- (9) Prepare photo mosaic overlay for Owner's presentation requirements. Overlay shall identify right-of-way, outline of street and major improvements and area features.
- (10) Provide report outlining recommendations, summarizing criteria, calculations, and other project information.

8. Preliminary Design Phase -

- a. Prepare preliminary plans, documents and data as follows:
 - (1) Design and layout all proposed street horizontal and vertical alignment on plan and profile sheets.
 - (2) Design and prepare typical street paving sections for all streets.
 - (3) Plot existing cross sections, including driveway and cross streets.
 - (4) Prepare plans of intersecting streets which depict all construction required to provide a smooth transition from the proposed to the existing pavement. Show top of curb elevations or edge of pavement elevations.
 - (5) Perform drainage design calculations and show all existing and proposed drainage facilities on the plans, on both the plan and profile. Show horizontal and vertical location, elevations, grades and structure detail. A drainage area map shall be furnished. Preliminary hydrology data shall include runoff quantities for the 10, 25, 50, and 100 year design storms.
 - (6) Prepare preliminary traffic signal layout and details for designated intersections. Identify traffic lane configurations.
 - (7) Prepare plans and details of City owned water and sanitary sewer facilities which require relocation to accommodate construction of the street and drainage improvements.
 - (8) Provide list of Engineer-developed details to be incorporated into plans.
 - (9) Draft preliminary notes on plans to fully describe the construction work to be performed.
 - (10) Prepare recommendations for sequence of construction and prepare preliminary layout of construction phasing and detours.

- (11) Prepare preliminary storm water and erosion control plans.
 - (12) Prepare draft copy of special provisions (special conditions) to the construction specifications.
 - (13) Prepare cost estimates for preliminary design.
 - (14) Provide design report including calculations and support data.
 - b. Prepare right-of-way plans to include the following:
 - (1) Plans to be drawn at 1" = 50' scale or larger scale.
 - (2) Identify property subdivisions, existing and proposed rights-of-way and easements, ownership names, addresses, temporary construction easements and related information.
 - (3) Provide complete information on plans for, and prepare legal descriptions for, acquisition of rights-of-way and easements including residual or severed tracts.
 - (4) Provide tabulation of tracts, ownerships, and areas (permanent and temporary construction easements) for each acquisition.
9. Final Design Phase -
- a. Prepare final design calculations, plans, profiles, details, paving sections, cross sections, pavement designs, detours and other items.
 - b. Prepare construction details which depict all typical items, including but not limited to, curbs, drainage inlets and junction boxes, underdrains, driveways, sidewalks and pavement markings. The City of Fort Smith Standard Drawings shall be utilized where applicable in lieu of details developed by the engineer.
 - c. As needed, prepare storm water pollution prevention plan in accordance with the requirements of ADEQ General Permit ARR150000, Part II, Section A.4.
 - d. Prepare final special conditions (special conditions) to the construction contract.
 - e. Calculate construction quantities in accordance with the City of Fort Smith standard construction specifications and format and submit copy of calculations.
 - f. Provide construction bid proposal form. Provide a computer disk containing the bid proposal form in accordance with City of Fort Smith format(s).
 - g. Prepare a recommendation of construction contract time.
 - h. Prepare schedule of construction quality control testing.
 - i. Prepare construction cost estimate.
 - j. Prepare design report to include complete calculations and data.
10. Bid Phase Services
- a. Advertise the project for bidding.
 - b. Provide up to ten (10) hard copy plan sets to City for distribution to bidders. Owner to maintain official list of plan holders.
 - c. Host pre-bid conference on-site, and answer any questions about the design documents. Disseminate meeting minutes and sign-in sheet to attendees.
 - d. Facilitate Requests for Information (RFI's) from bidders and distribute any required addendums.

- e. Receive bids on behalf of the City.
 - f. Prepare bid tabulation and provide recommendation to the City for the construction contract award.
 - g. Assist City in preparation of contract documents for execution between Owner and Contractor.
 - h. Submit “Issued for Construction” plan sets: five (5) half-sized copies, and one (1) full-size copy.
11. Construction Phase -
- a. Establish centerline (with references) along existing roadway. Set monuments on centerline at 400 foot intervals and, if necessary, at intervisible points between, with a minimum of 2 monuments per site. Survey control shall be established on the City Fort Smith Coordinate System.
 - b. Stake construction limits. Larger tracts shall be staked at property lines and at intervisible points.
 - c. Install right-of-way monuments, consisting of iron rods with aluminum caps, on the right-of-way line at all points of curvature (PC) and tangency (PT) and at intersecting street rights-of-way. Install monuments and marker posts at drainage channel easements. Final monuments to be set one time upon completion of construction.
 - d. Engineer is prohibited from entering into an agreement with the Contractor for providing construction staking services in relation to this project.
12. General -
- a. All work designed as part of this contract shall comply with the following documents, including any revisions or errata: City of Fort Smith Minimum Street Standards (July 1, 2020), City of Fort Smith “2011 Storm Drainage Standards” (October 2011), City of Fort Smith “Standard Specifications for Public Works Construction” (October 2018), and City of Fort Smith “Standard Drawings” (November 2012).
 - b. Plans shall be reducible, and legible, to scalable half size plans on 11" x17" sheets. One set of reproducible plans will be provided for right-of-way. In addition, provide plans on computer disk in AutoCAD 2000 or earlier, format for preliminary and final plans.
 - c. Record drawings will be provided by the Owner, unless mutually agreed and captured under a separate agreement or amendment.
 - d. All lighting installation and relocation is included in the franchise utility relocation.
 - e. Attendance at two public meetings for discussion of route, design, and construction is included.
 - f. Attend meetings with Owner and Agencies for plan review project coordination, and right-of-way.
 - g. No on-site meetings are included beyond those listed. Additional time may be

- requested by Client on an hourly basis (time and travel).
 - h. Construction phase services, including construction observation and administration, are explicitly excluded. Pay application review is not included. Any Construction Phase Services Scope will be considered under a separate agreement or amendment.
 - i. Scope does not include an environmental assessment or evaluation of the site.
 - j. Traffic Signage plans are not included in scope.
13. The services specified for the various phases of the Agreement shall be completed and all stipulated documents shall be submitted to the OWNER within the following specified times following written authorization to proceed with that phase of services.

<u>Phase</u>	<u>Delivery</u>
Calendar Days After	
Concept Phase	90 days after NTP
Preliminary Plans/Documents	180 days after NTP (90 days after Concept phase)
Final Design	300 days after NTP (120 days after preliminary plans)

Note: design schedule does not include any additional time that may be required for land acquisition required to begin construction.

- 14. The ENGINEER should anticipate a 30 calendar day review period by the City staff between the completion of one phase and the beginning of the following phase. Additional time may be required for review by agencies; this time is not included in the proposed timeline in Section 13.
- 15. The plans, specifications and contract documents authorized by this Agreement shall be prepared to allow construction bids to be received and construction to be performed under one construction contract with the exception of demolition of building structures which will be handled as a separate construction contract. Provision of any plans or specifications needed for the demolition contracts will be handled under the Additional Services provision of this contract.
- 16. OWNER will provide construction administration (excluding obtaining bids for construction which is covered in Section 10 above) and resident inspection of the project(s) unless otherwise agreed and negotiated in a separate agreement or amendment.
- 17. Subcontracting of services by the ENGINEER shall have prior approval of the OWNER.



Exhibit B: Project Location
Intersection At Free Ferry And Albert Pike

JULY 27 2023
SCALE 1" = 150'



MICKLE GRIFFIN
ENGINEERS - SURVEYORS

3434 Country Club Ave. (479) 649-8484
P.O. Box 8130 Fax: (479) 649-8486
Fort Smith, Arkansas info@micklegriffin.com

Exhibit C
Mickle Griffin Hourly Rates 2023
Free Ferry & Albert Pike Intersection Improvements
Fort Smith, Arkansas
Project No. 23-09-A
August 04, 2023

2023 HOURLY RATE SCHEDULE

Published: February 20, 2023

Engineer / Principal Officer	\$180.00
Engineer IV	\$155.00
Engineer III	\$143.00
Engineer II	\$129.00
Engineer I	\$103.00
Director of Field Services	\$133.00
Technician II	\$120.00
Technician I	\$100.00
Drafting III	\$92.00
Drafting II	\$77.00
Drafting I	\$60.00
Registered Land Surveyor	\$140.00
Survey Party	
2 Person Crew	\$125.00
3 Person Crew	\$190.00
Clerical III	\$90.00
Clerical II	\$70.00
Clerical I	\$50.00

EXHIBIT D
 "Insurance Certificates"



MICKINC-01

LINDA

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
 8/4/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER BHC Insurance 5500 Euper Lane P. O. Box 3529 Fort Smith, AR 72913-3529	CONTACT NAME: Linda E. Thomas PHONE (A/C, No, Ext): (479) 343-9117 E-MAIL ADDRESS: lindathomas@bhca.com	FAX (A/C, No): (479) 484-5185
	INSURER(S) AFFORDING COVERAGE INSURER A : Cincinnati Insurance Company INSURER B : Accident Fund National Ins Co INSURER C : INSURER D : INSURER E : INSURER F :	
INSURED Mickie Griffin, LLC; Data Testing, Inc. P. O. Box 8130 Fort Smith, AR 72902		

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC <input checked="" type="checkbox"/> OTHER: Incl Contractual Liab	X	X	EPP 0133594	4/1/2023	4/1/2024	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Per occurrence) \$ 500,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	X	X	EPP 0133594	4/1/2023	4/1/2024	COMBINED SINGLE LIMIT (Per accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 0			EPP 0133594	4/1/2023	4/1/2024	EACH OCCURRENCE \$ 4,000,000 AGGREGATE \$ 4,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	100091924	4/1/2023	4/1/2024	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 Free Ferry & Albert Pike Intersection Improvements, Project No. 23-09-A
 Additional Insured Clause and Waiver of Subrogation in favor of the Owner, its officers, directors, managers & employees, individually & collectively, applies to General Liability and Automobile policies when required by written contract.
 30 Days' Notice of Cancellation applies except 10 Days for nonpayment of premium.

CERTIFICATE HOLDER City of Fort Smith Engineering Director P. O. Box 1908 Fort Smith, AR 72902-1908	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
---	---

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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

8/09/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).

PRODUCER: Edgewood Partners Ins. Center, 3780 Mansell Rd. Suite 370, Alpharetta, GA 30022. CONTACT NAME: ACEC Certificate Specialist, PHONE: 770-552-4225, FAX: (A/C, No):, E-MAIL ADDRESS: ACECCertificates@greyling.com. INSURER(S) AFFORDING COVERAGE: INSURER A: Beazley Insurance Company, Inc. NAIC #: 37540. INSURED: Mickle Griffin, LLC, Mickle Wagner Coleman Inc.-Data Testing, 3434 Country Club Avenue, Fort Smith, AR 72903.

COVERAGES CERTIFICATE NUMBER: 23-24 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Table with columns: INSR LTR, TYPE OF INSURANCE, ADDL INSR, SUBR WVD, POLICY NUMBER, POLICY EFF (MM/DD/YYYY), POLICY EXP (MM/DD/YYYY), LIMITS. Rows include Commercial General Liability, Automobile Liability, Umbrella Liab, Excess Liab, Workers Compensation and Employers' Liability, and Professional Liability.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) Re: Project - Free Ferry & Albert Pike Intersection Improvements, Project # 23-09-A. Should any of the above described policies be cancelled by the issuing insurer before the expiration date thereof, 30 days' written notice (except 10 days for nonpayment of premium) will be provided to the Certificate Holder.

CERTIFICATE HOLDER: City of Fort Smith Engineering Department, PO Box 1908, Fort Smith, AR 72902. CANCELLATION: SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE: [Signature]

EXHIBIT E
“Engineering Design Cost Estimate”

Engineering Cost Estimate														Line Total	Line Total		
Free Ferry & Albert Pike Intersection Improvements																	
				Principal	Engr III	Engr II	Draft III	Draft II	Field Dir	PLS	Surv Crew 2 ppl	Clerical II	Subcontract Expense	Total Ea.			
				EP	E3	E2	D3	D2	FD	PS	S2	C2					
1. Concept Design																	
Item	Task Description	QTY	Year	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[USD]	[Hrs]	[Hrs]	[USD]	
1.1	Collect survey field information	1	2023	4	8		8	24	8	8	24			84	84	9,632	
1.2	Preliminary design inc. TEC subconsult	1	2023	8	16			16						40	40	4,960	
1.3	Schematic Design submittal 30%	1	2023	24	24		8	40						96	96	11,568	
														Item 1 Subtotal:	220	26,160	
2. Preliminary Design																	
Item	Task Description	QTY	Year	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[USD]	[Hrs]	[Hrs]	[USD]	
2.1	Public input meetings	1	2023	16	24		8	16						64	64	8,280	
2.2	Utility relocation coordination	1	2023	16	24		8	24		8	16			96	96	12,016	
2.3	Plan and Profile Design	1	2023	24	40		40	80						184	184	19,880	
2.4	Geotechnical and pavement design	1	2023	4	8		4	8						24	24	2,848	
2.5	60% submittal	1	2024	8	16		8	40						72	72	7,997	
														Item 2 Subtotal:	440	51,021	
3. Final Design																	
Item	Task Description	QTY	Year	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[USD]	[Hrs]	[Hrs]	[USD]	
3.1	ADEQ SWPPP	1	2024	4	16		8	8						36	36	4,622	
3.2	Construction Sequencing	1	2024	8	40		16	16						80	80	10,456	
3.3	90% Submittal	1	2024	16	40		16	32						104	104	13,288	
														Item 3 Subtotal:	220	28,366	
														Engineering Design Subtotal:		105,547	
4. Bidding & Construction																	
Item	Task Description	QTY	Year	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[USD]	[Hrs]	[Hrs]	[USD]	
4.1	Final Plans and Specifications	1	2024	8	40		16	40						104	104	12,415	
4.2	Advertising and Bidding	1	2024	8	24			4				16		52	52	6,678	
														Item 4 Subtotal:	156	19,093	
5. Easement and Right of Way																	
Item	Task Description	QTY	Year	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[USD]	[Hrs]	[Hrs]	[USD]	
5.1	RoW, easement research, preparation	5	2024	2	4		2	4		2	6			20	100	13,006	
5.2	Easement Right of Way acquisition	5	2024	6	10		2	6	5	4	4			37	185	25,869	
														Item 5 Subtotal:	285	38,876	
6. Reimbursables																	
Item	Task Description	QTY	Year	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[Hrs]	[USD]	[Hrs]	[Hrs]	[USD]	
6.1	Traffic Engineering Consultants												10,000			10,000	
6.2	Right of Way Appraisal												10,000			10,000	
6.3	Geotechnical												5,500			5,500	
														Item 6 Subtotal:		25,500	
				Total	148	320		140	348	8	16	40	16		Total:	1,036	189,016

INTER-OFFICE MEMO

TO: Ray Gosack, City Administrator

FROM: Stan Snodgrass, P.E., Director of Engineering

DATE: July 18, 2013

SUBJECT: Albert Pike and Free Ferry Intersection Discussion
as requested by the Board of Directors

The City undertook the construction of the Albert Pike Avenue widening project between Free Ferry Road and Grand Avenue in 2006. The original design included the installation of traffic signals and widening to accommodate left turn lanes at the intersections of Albert Pike Avenue with Free Ferry Road, Park Avenue and Kinkead Avenue. During the course of the design, numerous public meetings were held and there were also several study sessions with the Board of Directors regarding this project. The Board of Directors revised the design to make several changes to the project in April 2005 (See attached Resolution R-59-05). The design revisions by the Board required that the intersection of Albert Pike and Free Ferry would remain as a 4 way stop and that Free Ferry Road would remain as a two lane road with no improvements due to impacts to adjacent properties.

Traffic Engineering Consultants, Inc. (TEC) was retained earlier this year to conduct a traffic signal warrant analysis and traffic delay study at this intersection. In April and May of this year, twenty four hour traffic counts and peak hour turning movements were collected at this location. Additionally the annual average daily traffic estimates (AADT) were reviewed along Albert Pike with the intersections of Free Ferry, Kinkead and Park (See attached AADT exhibit).

TEC's traffic signal analysis looked at several sets of thresholds that are commonly referred to as "warrants". Each warrant addresses a possible need for signalization of an intersection. The analysis determined that three traffic signal warrants are met for this intersection, and TEC recommends the installation of a traffic signal at this intersection, similar to the recommendations in 2005. TEC's traffic signal warrant analysis is included as Appendix "A".

We have evaluated several options to improve the traffic flow at this location. The first two options consist of the widening of all four legs of the intersection to accommodate left turn lanes and the installation of a traffic signal. These two options are shown as Option 1A and 1B on the attached exhibits. The only difference in these two options is that Option 1A widens Free Ferry entirely to the south while option 1B splits the widening of Free Ferry on both the north and south sides. The original design in 2005 proposed to widen the intersection entirely to the south, however there was citizen feedback that the widening should be split equally on both sides.

Another option is the installation of a roundabout at this location. This option is shown as Option 2 on the attached exhibit. This option would require a greater amount of right of way and have a significant impact to the residential properties at the corners.

Ray Gosack
July 18, 2013
Page 2

The preliminary cost estimates for these options are as follows:

- Option 1A \$1.8 million
- Option 1B \$1.9 million
(additional utility poles relocation required)
- Option 2 \$1.9 million
(additional utility poles relocation required, additional ROW required, traffic
signal cost is removed)

Should the Board desire to proceed with intersection improvements at this location, we would like to request their guidance on which option to use and whether this project should be included with the 2014 street and drainage improvement plan which will be presented to the Board this fall.

Enclosures

RESOLUTION NO. R-59-05

A RESOLUTION CONFIRMING THE DESIGN DECISIONS FOR
THE ALBERT PIKE STREET WIDENING PROJECT
PROJECT NO. 00-02-C

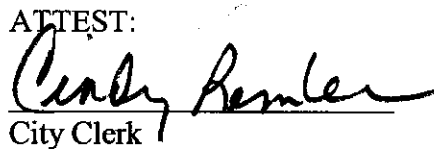
BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE CITY OF FORT SMITH,
ARKANSAS, THAT:

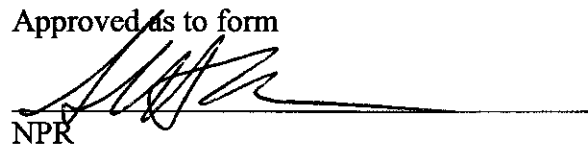
SECTION 1: The Albert Pike Street widening project be revised as follows:

- A. Intersection of Albert Pike and Free Ferry will remain as a 4 way stop.
- B. Free Ferry Road will remain as a two lane road with no improvements.
- C. Intersection of Albert Pike and Park will be signalized and will be widened to allow for a left turn lane pocket at all approaches.
- D. Intersection of Albert Pike and Kinkead will be signalized and will be widened to allow for a left turn lane pocket at all approaches.
- E. Albert Pike between Grand and Kinkead will be a continuous 3 lane curb and gutter 37 foot wide street.
- F. Albert Pike between Kinkead and Park will be a continuous 3 lane curb and gutter 37 foot wide street.
- G. Albert Pike between Park and Free Ferry will be a continuous 2 lane curb and gutter 32 foot wide street.

Adopted on this 19th day of April, 2005.

APPROVED: 
Mayor

ATTEST:

City Clerk

Approved as to form

NPR

INTEROFFICE MEMORANDUM

To: Bill Harding, City Administrator

From: Stan Snodgrass, P.E., Director of Engineering *SS*

Subject: North Albert Pike Avenue Widening - Free Ferry to Grand Avenue
Project 00-02-C
Right of Way Acquisition

Date: April 15, 2005

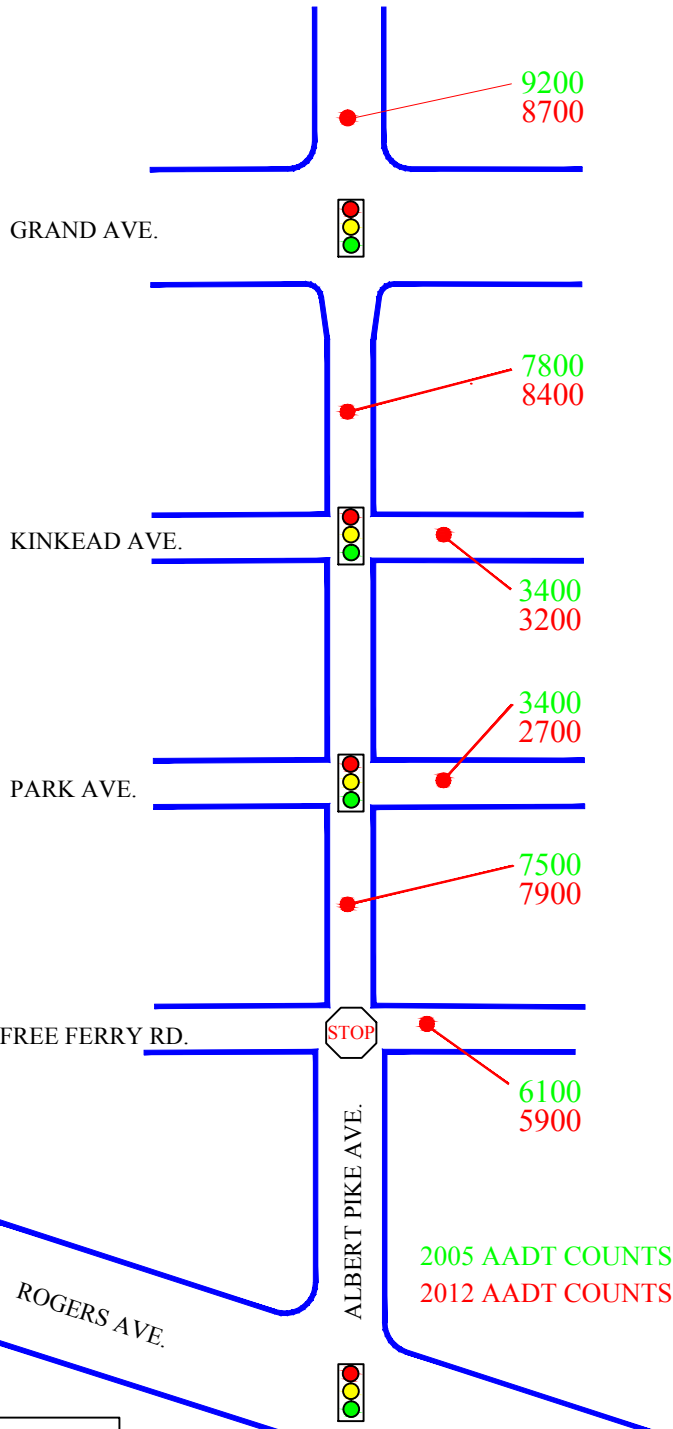
The attached resolution details the recommendations by the Board of the Directors that were discussed at the April 14, 2005 study session. The two signalized intersections will utilize color coated decorative poles with arched mast arms but without the large bases. Sidewalk will be constructed along both sides of Albert Pike between Grand Avenue and Free Ferry Road. A sidewalk will also be constructed along the east side of Albert Pike south of Free Ferry Road extending to the existing sidewalk north of Rogers Avenue. The improved street sections will include curb and gutter and contain an enclosed storm drainage system. The majority of the overhead utility crossings along this section of Albert Pike will be relocated underground. Landscaping will be installed where feasible.

Should you have any questions please advise.

U:\My Documents\00-02-C (Albert Pike Widening)\albert pike revisions 041505.wpd

The City of Fort Smith Arkansas
Engineering Department
623 Garrison Avenue • P.O. Box 1908
Fort Smith, Arkansas 72902
Phone: 479-784-2225 • Fax: 479-784-2245

ANNUAL AVERAGE DAILY TRAFFIC (AADT)* (VEHICLES PER DAY)



* ESTIMATED TRAFFIC COUNTS FROM ARKANSAS STATE HIGHWAY & TRANSPORTATION DEPARTMENT ANNUAL COUNTS

G:\DRAWINGS\CIP\13-12-C Albert Pike-Free Ferry Int\ AADT Exhibit.dwg 07/17/13-14:06 RBR EXHIBIT

<p>AADT EXHIBIT ALBERT PIKE AND FREE FERRY INTERSECTION IMPROVEMENTS</p>		Project: 13-12-C
		Date: JULY 2013
		Scale: NONE
		Drawn By: RBR



EXHIBIT 1A
 ALBERT PIKE AND FREE FERRY
 INTERSECTION IMPROVEMENTS



Project:	13-12-C
Date:	JULY 2013
Scale:	NONE
Drawn By:	RBR

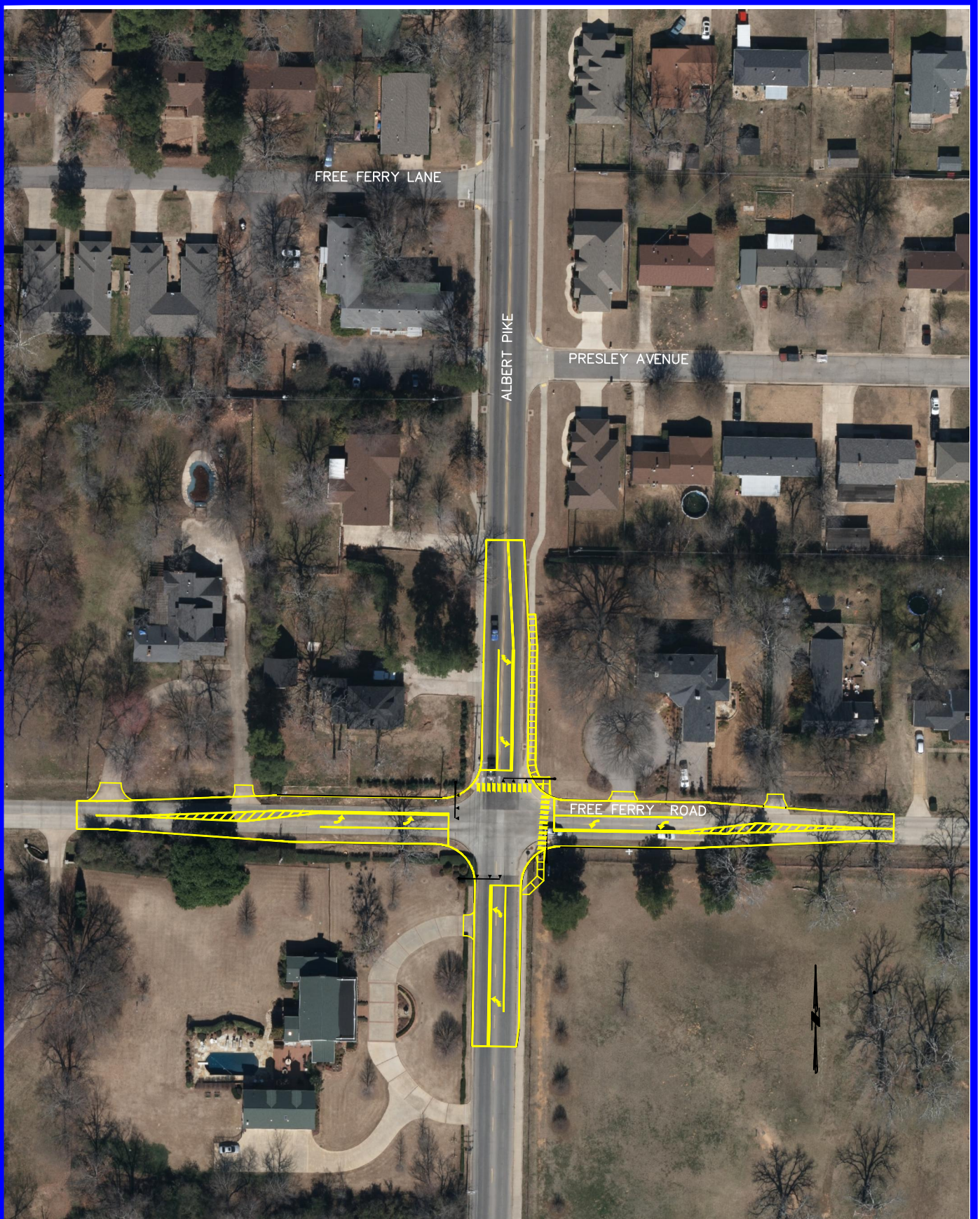


EXHIBIT 1B
 ALBERT PIKE AND FREE FERRY
 INTERSECTION IMPROVEMENTS



Project:	13-12-C
Date:	JULY 2013
Scale:	NONE
Drawn By:	RBR

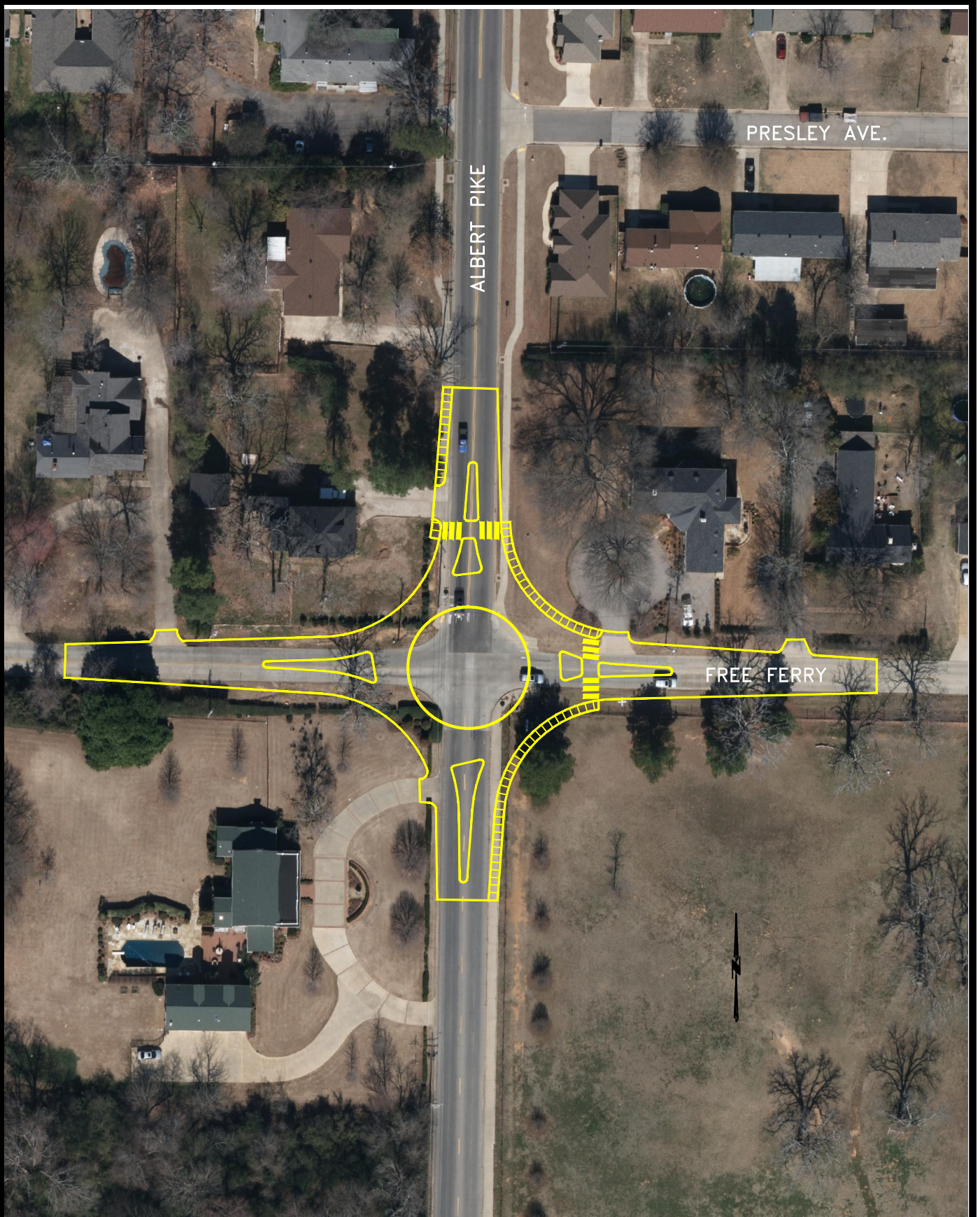


EXHIBIT 2
 ALBERT PIKE AND FREE FERRY
 INTERSECTION IMPROVEMENTS



Project:	13-12-C
Date:	JULY 2013
Scale:	NONE
Drawn By:	RBR



**TRAFFIC SIGNAL
WARRANT ANALYSIS**
Albert Pike and Free Ferry
Fort Smith, Arkansas

Prepared for:
City of Fort Smith

July 2013

Prepared by:
Traffic Engineering Consultants, Inc.

Steven D. Hofener

Date *7/15/13*

Steven D. Hofener, P.E., P.T.C.E.
Arkansas P.E. #6565
CA # 194





1.0 INTRODUCTION

Traffic Engineering Consultants, Inc (TEC) was retained by the City of Fort Smith to conduct a traffic signal warrant analysis and traffic delay study at the intersection of Albert Pike and Free Ferry. Currently, the intersection is controlled with 4-way stop signs. Free Ferry is a two lane road east and west with a posted speed limit of 35 miles per hour. Albert Pike is a two lane road north and south with posted speed limit of 35 miles per hour.

2.0 TRAFFIC VOLUME COUNTS

Twenty-four hour volume counts were taken on all approaches of the study intersection on April 30 and May 1st, 2013 by the City of Fort Smith. Additionally, a.m. (7:00 to 9:00), noon (11 a.m. to 1 p.m.), and p.m. (4:00 to 6:00) peak hour turning movement counts were collected at the intersection on April 25th, 2013 by the City of Fort Smith. The traffic data is included in the appendix.

3.0 CRASH HISTORY

The City of Fort Smith provided crash records for the last 3 years. There were 7 crashes in 2010. 5 of the crashes were angle crashes and 2 were rear end. In 2011 there were 4 crashes. In 2012 there were 5 angle crashes and 5 rear end crashes for a total of 10 crashes. For 2013 to date there have been 3 crashes. One crash was an angle crash and the other two were rear end.

4.0 TRAFFIC SIGNAL WARRANT ANALYSES

The 24 hour traffic count data was used to perform a Traffic Signal Volume Warrant Analysis. The need for a traffic signal is based on minimum traffic volume thresholds. The thresholds are national policy and have been developed to determine when traffic volumes are too high for a 4-way stop intersection and expected delay to motorists is excessive. There are several sets of thresholds that are commonly referred to as "Warrants". Each warrant addresses a possible need for signalization of an intersection.

Warrant 1 provides traffic volume thresholds for an average day and these minimum traffic volumes should be met for each of 8 hours throughout the day. Warrant 2 has higher traffic volume thresholds but the minimums should be met only 4 hours out of the day. Warrant 2 addresses intersections where traffic may not be heavy all day long but the traffic is quite heavy during peak periods. Warrant 3 has even



higher traffic volume thresholds. These thresholds need only to be met 1 hour of the day. This warrant addresses intersections where there is very heavy traffic usually associated with the p.m. peak hour. Warrant 7 is the Crash Experience warrant. If 5 or more crashes that are susceptible to correction by the installation of a traffic signal have occurred in a year, the minimum traffic volume thresholds in Warrant 1 are reduced by 20%. Crashes susceptible to correction are angle crashes. The crash warrant recognizes the fact that the 4 way stop signs are not working well if there are 5 or more angle crashes in a year. The minimum traffic volumes must be met for each of 8 hours throughout the day.

Warrants 1, 2 3 and 7 were evaluated for the intersection of Albert Pike and Free Ferry using the 24 hour volume counts provided and the existing intersection geometry. The results of the analysis are included in the Appendix. A summary of the results is as follows:

2012 Existing Traffic Conditions

- **Warrant 1 – Eight Hour Vehicular Volumes – Not Satisfied**

The required volume thresholds were reached for 6 hours of the 8 hours needed. Albert Pike carries the most traffic and is considered the “Major” road. The traffic volume needed for Albert Pike is 500 vehicles per hour. The next (other than the 6 hours) two highest hours are 491 vehicles and 452 vehicles. Free Ferry meets the minimum volume 14 hours per day. While the warrant is not technically met, it is very close to meeting the warrant.

- **Warrant 2 – Four Hour Volumes – Met**

The required volumes were reached for 7 hours and only 4 are needed.

- **Warrant 3 – Peak Hour Volumes – Met**

The required volumes were reached for all peak hours.

- **Warrant 7 – Crash Experience – Met**

The required volumes for Warrant 1A are reduced by 20%. The minimum hourly total traffic volume threshold for the major movements (Albert Pike) is 400 vehicles per hour. The minimum hourly approach volume for the heaviest minor approach is 120 vehicles per hour. Warrant 7 is met using the Warrant 1A reduced thresholds 11 hours of the day.

Traffic Warrants 2, 3, and 7 are met. Traffic Warrant 1 is almost met. Traffic signal installation is recommended at the intersection.



5.0 TRAFFIC DELAY STUDY

A Traffic Delay Study was conducted on April 30, 2013 by city staff. For each one minute period, the numbers of cars waiting or stopped at the stop sign were counted for each direction. The delay study was conducted from 3:30 p.m. to 5:30 p.m. The collected data is in the Appendix.

Delays were calculated for each 15 minute period from 3:30 p.m. to 5:30 p.m. The 15 minute traffic volumes were also used in the analysis. For each 15 minute period, the total number of minutes motorists were waiting was calculated for each direction. The total number of minutes was divided by the total traffic volume to determine the average delay per vehicle per approach. The average delay per vehicle for each approach was then added together for the 15 minute period to determine the average delay for the intersection.

Table 1 summarizes the collected data and the calculated averages. **Figure 1** is a graph of each 15 minute period based on total intersection delay.

From 3:45 p.m. to 4 p.m. the average intersection delay increases to an average of 48.9 seconds per vehicle. The delays trend down until 4:45 p.m. at which time the delays significantly increase. The greatest average intersection delay is from 5:15 p.m. to 5:30 p.m. at 102 seconds per vehicle. The 4-way stop signs are creating excessive delay and back up of traffic which supports the findings of the Traffic Signal Warrant Study.

6.0 LEVEL-OF-SERVICE ANALYSIS

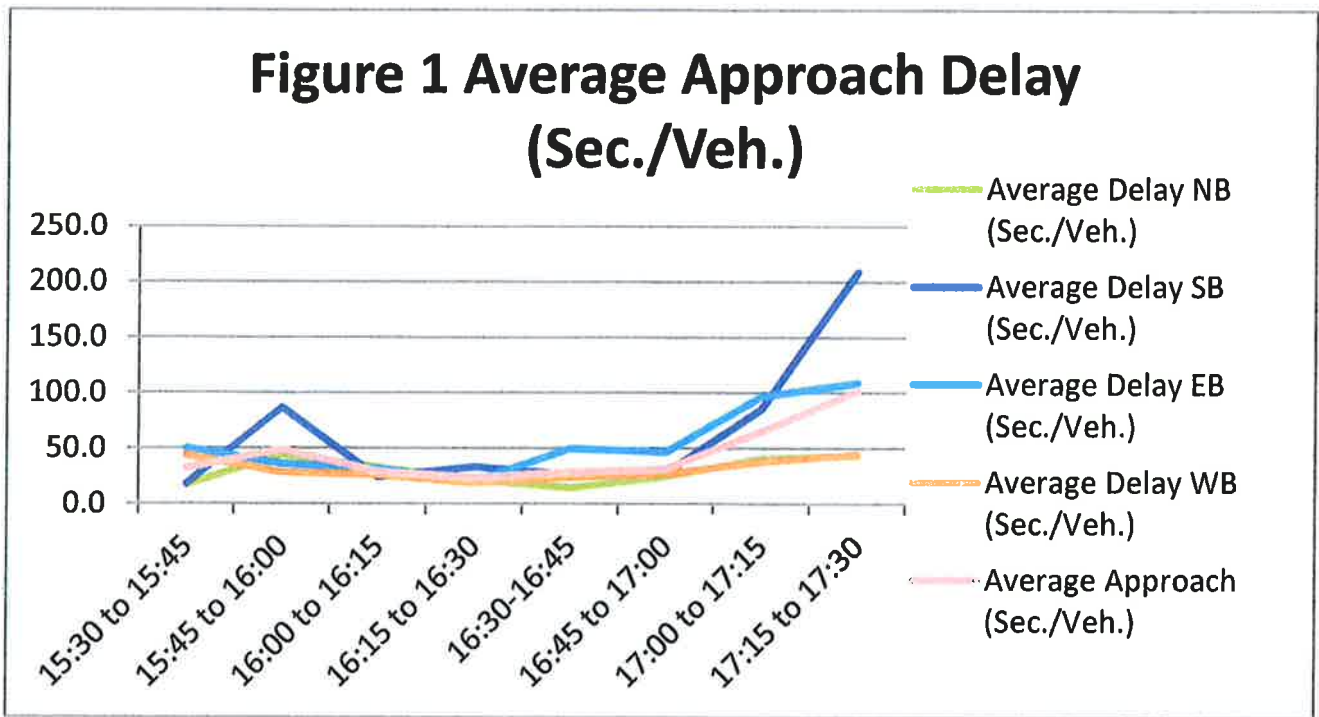
The traffic volume information for the p.m. peak hour was entered into Synchro 8 to determine the calculated delay using the *Highway Capacity Software Analysis Method* (HCSAM). For existing geometry and assuming a 4-way stop, the level-of-service (LOS) for the eastbound left turn is LOS "F". The average calculated delay for this approach is 52 seconds. The HCSAM model under estimates delays when the LOS is "F". The calculated intersection delay is 35.9 seconds per vehicle. This number is under estimated due to the LOS "F". The field measured delay is considerably higher.

An analysis was made assuming signalization of the intersection with existing geometry. The LOS improves to LOS "C" for the eastbound approach with an average delay of 28 seconds.

Table 1 Intersection Delay Summary

Time Period	Total Delay				Volume				Average Delay				Total Delay (Sec./Veh.)	Average Approach (Sec./Veh.)
	NB (Seconds)	SB (Seconds)	EB (Seconds)	WB (Seconds)	NB (Veh.)	SB (Veh.)	EB (Veh.)	WB (Veh.)	NB (Sec./Veh.)	SB (Sec./Veh.)	EB (Sec./Veh.)	WB (Sec./Veh.)		
15:30 to 15:45	19	29	76	68	68	97	91	93	16.8	17.9	50.1	43.9	128.7	32.2
15:45 to 16:00	46	130	57	32	62	90	95	68	44.5	86.7	36.0	28.2	195.4	48.9
16:00 to 16:15	27	41	46	24	49	102	87	55	33.1	24.1	31.7	26.2	115.1	28.8
16:15 to 16:30	19	45	33	18	53	81	96	57	21.5	33.3	20.6	18.9	94.4	23.6
16:30-16:45	11	45	68	24	46	104	82	60	14.3	26.0	49.8	24.0	114.1	28.5
16:45 to 17:00	28	37	80	33	68	81	103	73	24.7	27.4	46.6	27.1	125.8	31.5
17:00 to 17:15	65	153	166	49	96	108	103	78	40.6	85.0	96.7	37.7	260.0	65.0
17:15 to 17:30	56	411	180	61	77	118	99	82	43.6	209.0	109.1	44.6	406.3	101.6

Figure 1 Average Approach Delay (Sec./Veh.)





The third analysis assumed the construction of left turn bays for all approaches. The LOS for eastbound improves to LOS "B" with an average delay of 16.4 seconds.

It is recommended that left turn bays be installed if the intersection is signalized. The 4-way stop gives left turning traffic the opportunity to make the left turn with opposing traffic stopped. With the installation of a traffic signal and the absence of left turn bays, two issues arise. Left turning traffic must wait until all opposing thru traffic clears the intersection. One or two left turners can block the approach. Secondly, if left turns are being made from both opposing directions, the left turners block each other's view of potential thru traffic.

The traffic counts show over 100 left turns being made for eastbound and westbound at noon, and for eastbound during the p.m. peak hour.

7.0 SUMMARY

The intersection of Albert Pike and Free Ferry should be signalized. The delays currently experienced are excessive. If the intersection is signalized, left turn bays should be installed.

Ideally, the left turn bays on each leg of the intersection should provide 150 feet of vehicle storage. If this is not possible, the distance can be reduced to 100 feet.

APPENDIX

EXISTING TRAFFIC DATA

**City of Fort Smith
Traffic Control Dept.
15 Min. Interval Counts
Albert Pike & Free Ferry**

April 30-May1, 2013

Time:	NB	SB	EB	WB
13:00	X	X	X	X
13:15	49	72	73	58
13:30	50	82	77	49
13:45	46	84	65	48
14:00	44	83	49	52
Total:	189	321	264	207
14:15	45	74	55	50
14:30	35	79	70	52
14:45	52	96	65	62
15:00	42	81	69	60
Total:	174	330	259	224
15:15	50	88	77	81
15:30	43	109	85	98
15:45	68	97	91	93
16:00	62	90	95	68
Total:	223	384	348	340
16:15	49	102	87	55
16:30	53	81	96	57
16:45	46	104	82	60
17:00	68	81	103	73
Total:	216	368	368	245
17:15	96	108	103	78
17:30	77	118	99	82
17:45	65	120	106	70
18:00	53	91	99	51
Total:	291	437	407	281
18:15	44	83	60	64
18:30	47	69	64	44
18:45	35	77	59	52
19:00	43	72	66	59
Total:	169	301	249	219
19:15	55	67	56	47
19:30	39	56	61	50
19:45	26	51	41	43
20:00	35	43	47	28
Total:	155	217	205	168

Time:	NB	SB	EB	WB
20:15	38	56	39	23
20:30	37	49	46	17
20:45	29	46	54	27
21:00	37	34	42	19
Total:	141	185	181	86
21:15	22	22	38	20
21:30	24	22	37	15
21:45	27	39	39	21
22:00	21	24	21	15
Total:	94	107	135	71
22:15	21	30	16	8
22:30	40	28	10	15
22:45	41	20	21	12
23:00	25	18	30	9
Total:	127	96	77	44
23:15	4	11	12	8
23:30	2	12	11	6
23:45	6	6	12	3
00:00	0	10	13	4
Total:	12	39	48	21
00:15	2	9	4	4
00:30	5	8	6	2
00:45	1	6	6	4
01:00	1	4	1	5
Total:	9	27	17	15
01:15	4	4	3	2
01:30	2	7	6	0
01:45	0	2	2	1
02:00	3	4	1	2
Total:	9	17	12	5
02:15	1	7	4	2
02:30	1	3	5	0
02:45	2	6	1	1
03:00	0	5	1	1
Total:	4	21	11	4
03:15	4	2	3	1
03:30	0	3	3	0
03:45	1	4	2	0
04:00	1	6	0	2
Total:	6	15	8	3
04:15	2	6	1	3
04:30	0	11	0	2
04:45	1	6	1	2
05:00	1	8	1	4
Total:	4	31	3	11

Time:	NB	SB	EB	WB
05:15	4	17	3	8
05:30	2	22	2	10
05:45	2	21	4	5
06:00	1	19	5	5
Total:	9	79	14	28
06:15	6	31	4	16
06:30	14	50	13	15
06:45	19	37	12	23
07:00	29	60	14	45
Total:	68	178	43	99
07:15	32	75	22	54
07:30	51	118	30	110
07:45	58	115	57	115
08:00	67	81	87	62
Total:	208	389	196	341
08:15	38	73	76	42
08:30	29	81	66	46
08:45	32	80	58	37
09:00	27	54	51	40
Total:	126	288	251	165
09:15	22	61	55	37
09:30	19	57	37	35
09:45	29	83	42	48
10:00	27	73	49	38
Total:	97	274	183	158
10:15	36	61	36	42
10:30	42	81	33	55
10:45	31	80	52	61
11:00	37	84	49	32
Total:	146	306	170	190
11:15	24	79	41	29
11:30	29	68	63	55
11:45	31	92	56	59
12:00	26	88	67	59
Total:	110	327	227	202
12:15	38	69	72	61
12:30	41	85	69	68
12:45	51	108	68	69
13:00	58	41	72	78
Total:	188	303	281	276
24 Hr. Totals:	2775	5040	3957	3403

Albert Pike and Free Ferry

AM Peak

	NB			EB			SB			WB			Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
2005 Count		7	95	14	67	127	46	33	180	94	48	282	54	1047
2013 Count		3	100	7	84	99	4	40	163	91	14	139	34	778
Comparison		-57.14%	5.26%	-50.00%	25.37%	-22.05%	-91.30%	21.21%	-9.44%	-3.19%	-70.83%	-50.71%	-37.04%	-25.69%

Noon Peak

	NB			EB			SB			WB			Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
2005 Count		10	143	24	48	136	12	45	193	49	28	123	55	866
2013 Count		12	139	18	116	153	9	59	167	100	19	146	590	1528
Comparison		20.00%	-2.80%	-25.00%	141.67%	12.50%	-25.00%	31.11%	-13.47%	104.08%	-32.14%	18.70%	972.73%	76.44%

PM Peak

	NB			EB			SB			WB			Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
2005 Count		14	180	32	114	245	19	53	217	89	48	282	62	1355
2013 Count		14	280	26	143	235	18	69	194	15	25	169	75	1263
Comparison		0.00%	55.56%	-18.75%	25.44%	-4.08%	-5.26%	30.19%	-10.60%	-83.15%	-47.92%	-40.07%	20.97%	-6.79%

City of Fort Smith Traffic Control Dept.

Delay Study

April 30, 2013

Albert Pike & Free Ferry

Time:	NB	SB	EB	WB
15:30	X	X	X	X
15:31	1	2	1	1
15:32	0	2	3	2
15:33	2	3	0	1
15:34	0	0	4	4
15:35	0	3	5	3
15:36	1	3	4	1
15:37	3	4	3	7
15:38	1	0	5	7
15:39	0	2	5	7
15:40	0	0	9	8
15:41	1	2	7	7
15:42	1	5	8	8
15:43	1	2	8	7
15:44	5	1	6	5
15:45	3	0	8	0
15:46	6	6	5	2
15:47	8	9	7	0
15:48	8	8	6	0
15:49	6	17	5	1
15:50	0	15	2	1
15:51	2	10	3	4
15:52	1	13	3	4
15:53	2	13	3	8
15:54	0	15	5	2
15:55	2	12	2	1
15:56	6	3	6	3
15:57	0	1	5	2
15:58	1	4	2	1
15:59	1	4	1	3
16:00	3	0	2	0
16:01	2	3	0	1
16:02	1	2	3	0
16:03	1	2	1	4
16:04	0	2	5	1
16:05	6	2	4	2
16:06	7	4	4	4
16:07	3	5	0	0

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Time:	NB	SB	EB	WB
16:53	3	0	4	4
15:54	0	3	8	3
16:55	1	7	6	0
16:56	1	1	4	4
16:57	4	2	4	4
16:58	2	2	6	1
16:59	5	2	1	2
17:00	4	0	7	0
17:01	5	1	10	2
17:02	4	1	8	3
17:03	5	2	11	2
17:04	3	1	10	1
17:05	3	1	11	4
17:06	1	7	11	1
17:07	2	10	11	2
17:08	5	10	11	0
17:09	5	8	11	4
17:10	4	14	12	3
17:11	5	18	12	7
17:12	5	18	12	7
17:13	3	19	12	7
17:14	6	20	12	4
17:15	9	23	12	2
17:16	6	28	12	4
17:17	6	28	12	4
17:18	5	28	12	6
17:19	1	28	12	2
17:20	2	28	12	3
17:21	4	28	12	5
17:22	5	28	12	6
17:23	8	28	12	6
17:24	5	25	12	6
17:25	1	25	12	6
17:26	4	28	12	5
17:27	4	28	12	4
17:28	1	28	12	1
17:29	1	28	12	2
17:30	3	25	12	1

CAPACITY ANALYSIS

HCM Unsignalized Intersection Capacity Analysis
 3: Albert Pike & Free Ferry

5/7/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Sign Control		Stop			Stop			Stop			Stop		
Volume (vph)	143	235	18	25	169	75	14	280	26	69	194	15	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	155	255	20	27	184	82	15	304	28	75	211	16	
Direction, Lane #	EB 1	WB 1	NB 1	SB 1									
Volume Total (vph)	430	292	348	302									
Volume Left (vph)	155	27	15	75									
Volume Right (vph)	20	82	28	16									
Hadj (s)	0.08	-0.11	-0.01	0.05									
Departure Headway (s)	7.7	8.0	7.9	8.2									
Degree Utilization, x	0.92	0.65	0.77	0.69									
Capacity (veh/h)	458	416	427	411									
Control Delay (s)	52.2	24.9	32.7	27.2									
Approach Delay (s)	52.2	24.9	32.7	27.2									
Approach LOS	F	C	D	D									
Intersection Summary													
Delay			35.9										
Level of Service			E										
Intersection Capacity Utilization			81.6%	ICU Level of Service									D
Analysis Period (min)			15										

Lanes, Volumes, Timings
3: Albert Pike & Free Ferry

5/6/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	143	235	18	25	169	75	14	280	26	69	194	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.962			0.989			0.993	
Flt Protected		0.982			0.995			0.998			0.988	
Satd. Flow (prot)	0	1818	0	0	1783	0	0	1839	0	0	1828	0
Flt Permitted		0.754			0.945			0.984			0.852	
Satd. Flow (perm)	0	1396	0	0	1693	0	0	1813	0	0	1576	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			40			7			5	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		640			705			755			665	
Travel Time (s)		12.5			13.7			14.7			13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	155	255	20	27	184	82	15	304	28	75	211	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	430	0	0	293	0	0	347	0	0	302	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	

Existing Geometry 5/6/2013 PM Peak Hour

Synchro 8 Report
Page 1

Lanes, Volumes, Timings
3: Albert Pike & Free Ferry

5/6/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.0	39.0		39.0	39.0		31.0	31.0		31.0	31.0	
Total Split (%)	55.7%	55.7%		55.7%	55.7%		44.3%	44.3%		44.3%	44.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		27.0	27.0		27.0	27.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.7			21.7			27.5			27.5	
Actuated g/C Ratio		0.38			0.38			0.48			0.48	
v/c Ratio		0.81			0.44			0.40			0.40	
Control Delay		28.0			12.8			13.1			13.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		28.0			12.8			13.1			13.6	
LOS		C			B			B			B	
Approach Delay		28.0			12.8			13.1			13.6	
Approach LOS		C			B			B			B	

Intersection Summary






















Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 57.3
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 17.8
 Intersection Capacity Utilization 81.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 3: Albert Pike & Free Ferry

Ø2	Ø4
31 s	39 s
Ø6	Ø8
31 s	39 s

Lanes, Volumes, Timings
3: Albert Pike & Free Ferry

5/6/2013

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	143	235	18	25	169	75	14	280	26	69	194	15	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	100		0	100		0	100		0	100		0	
Storage Lanes	1		0	1		0	1		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frnt		0.989			0.954			0.987			0.989		
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1770	1842	0	1770	1777	0	1770	1839	0	1770	1842	0	
Flt Permitted	0.433			0.483			0.574			0.404			
Satd. Flow (perm)	807	1842	0	900	1777	0	1069	1839	0	753	1842	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		5			30			6			5		
Link Speed (mph)		35			35			35			35		
Link Distance (ft)		640			705			755			665		
Travel Time (s)		12.5			13.7			14.7			13.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	155	255	20	27	184	82	15	304	28	75	211	16	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	155	275	0	27	266	0	15	332	0	75	227	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		12			12			12			12		
Link Offset(ft)		0			0			0			0		
Crosswalk Width(ft)		16			16			16			16		
Two way Left Turn Lane													
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Number of Detectors	1	2		1	2		1	2		1	2		
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru		
Leading Detector (ft)	20	100		20	100		20	100		20	100		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	20	6		20	6		20	6		20	6		
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94			94			94			94		
Detector 2 Size(ft)		6			6			6			6		
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA		
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	8			4			6			2			
Detector Phase	7	4		3	8		5	2		1	6		

Lanes, Volumes, Timings
3: Albert Pike & Free Ferry

5/6/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	15.0	20.0		15.0	20.0		15.0	20.0		15.0	20.0	
Total Split (s)	15.0	20.0		15.0	20.0		15.0	20.0		15.0	20.0	
Total Split (%)	21.4%	28.6%		21.4%	28.6%		21.4%	28.6%		21.4%	28.6%	
Maximum Green (s)	11.0	16.0		11.0	16.0		11.0	16.0		11.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	19.4	18.8		21.0	12.7		22.8	17.4		21.4	21.8	
Actuated g/C Ratio	0.36	0.34		0.39	0.23		0.42	0.32		0.39	0.40	
v/c Ratio	0.35	0.43		0.06	0.61		0.03	0.56		0.17	0.31	
Control Delay	13.1	18.2		10.6	25.6		11.2	25.4		12.4	15.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.1	18.2		10.6	25.6		11.2	25.4		12.4	15.8	
LOS	B	B		B	C		B	C		B	B	
Approach Delay		16.4			24.2			24.8			15.0	
Approach LOS		B			C			C			B	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 54.5
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 19.9
 Intersection Capacity Utilization 54.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 3: Albert Pike & Free Ferry

Ø1	Ø2	Ø3	Ø4
15 s	20 s	15 s	20 s
Ø5	Ø6	Ø7	Ø8
15 s	20 s	15 s	20 s

TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic Engineering Conslts. Inc.
Albert Pike and Free Ferry

Signal Warrants - Summary

Major Street Approaches

Northbound: Albert Pike
Number of Lanes: 1
85% Speed < 40 MPH.
Total Approach Volume: **2,775**

Southbound: Albert Pike
Number of Lanes: 1
85% Speed < 40 MPH.
Total Approach Volume: **5,040**

Minor Street Approaches

Eastbound: Free Ferry
Number of Lanes: 1

Total Approach Volume: **3,957**

Westbound: Free Ferry
Number of Lanes: 1

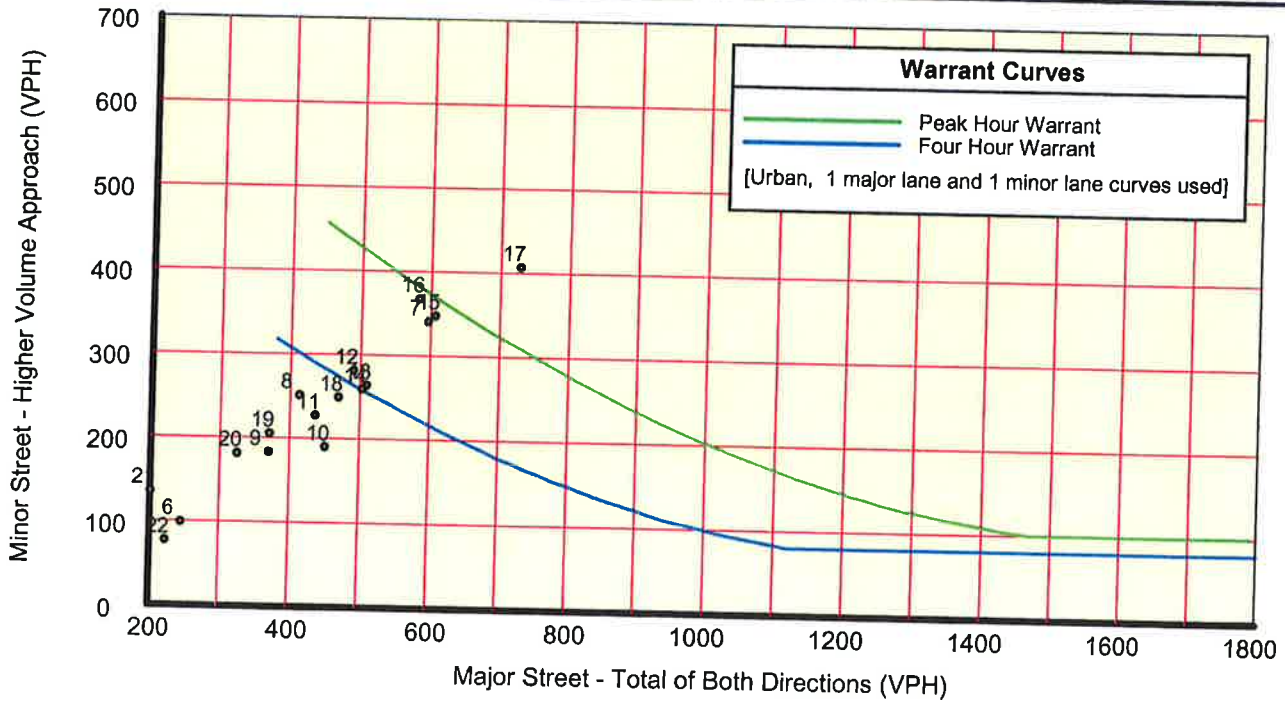
Total Approach Volume: **3,403**

Warrant Summary (Urban values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Not Satisfied
Warrant 1A - Minimum Vehicular Volume	Not Satisfied
Required volumes reached for 6 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic	Not Satisfied
Required volumes reached for 0 hours, 8 are needed	
Warrant 1 A&B - Combination of Warrants	Not Satisfied
Required volumes reached for 2 hours, 8 are needed	
Warrant 2 - Four Hour Volumes	Satisfied
Number of hours (7) volumes exceed minimum >= minimum required (4).	
Warrant 3 - Peak Hour	Satisfied
Warrant 3A - Peak Hour Delay	Satisfied
Number of hours (42) volumes exceed minimum >= required (1). Delay data not evaluated.	
Warrant 3B - Peak Hour Volumes	Satisfied
Volumes exceed minimums for at least one hour.	
Warrant 4 - Pedestrian Volumes	Not Evaluated
Warrant 5 - School Crossing	Not Evaluated
Warrant 6 - Coordinated Signal System	Not Evaluated
Warrant 7 - Crash Experience	Not Evaluated
Warrant 8 - Roadway Network	Not Evaluated
Warrant 9 - Intersection Near a Grade Crossing	Not Evaluated

Traffic Engineering Conslts. Inc.
Albert Pike and Free Ferry

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor Vol	Dir	War 1A			War 1B			War 1A&B		
				Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	36	17	EB	500-No	150-No	---	750-No	75-No	---	600-No	120-No	---
01:00	26	12	EB	500-No	150-No	---	750-No	75-No	---	600-No	120-No	---
02:00	25	11	EB	500-No	150-No	---	750-No	75-No	---	600-No	120-No	---
03:00	21	8	EB	500-No	150-No	---	750-No	75-No	---	600-No	120-No	---
04:00	35	11	WB	500-No	150-No	---	750-No	75-No	---	600-No	120-No	---
05:00	88	28	WB	500-No	150-No	---	750-No	75-No	---	600-No	120-No	---
06:00	246	99	WB	500-No	150-No	---	750-No	75-Yes	Minor	600-No	120-No	---
07:00	597	341	WB	500-Yes	150-Yes	Both	750-No	75-Yes	Minor	600-No	120-Yes	Minor
08:00	414	251	EB	500-No	150-Yes	Minor	750-No	75-Yes	Minor	600-No	120-Yes	Minor
09:00	371	183	EB	500-No	150-Yes	Minor	750-No	75-Yes	Minor	600-No	120-Yes	Minor
10:00	452	190	WB	500-No	150-Yes	Minor	750-No	75-Yes	Minor	600-No	120-Yes	Minor
11:00	437	227	EB	500-No	150-Yes	Minor	750-No	75-Yes	Minor	600-No	120-Yes	Minor
12:00	491	281	EB	500-No	150-Yes	Minor	750-No	75-Yes	Minor	600-No	120-Yes	Minor
13:00	510	264	EB	500-Yes	150-Yes	Both	750-No	75-Yes	Minor	600-No	120-Yes	Minor
14:00	504	259	EB	500-Yes	150-Yes	Both	750-No	75-Yes	Minor	600-No	120-Yes	Minor
15:00	607	348	EB	500-Yes	150-Yes	Both	750-No	75-Yes	Minor	600-Yes	120-Yes	Both
16:00	584	368	EB	500-Yes	150-Yes	Both	750-No	75-Yes	Minor	600-No	120-Yes	Minor
17:00	728	407	EB	500-Yes	150-Yes	Both	750-No	75-Yes	Minor	600-Yes	120-Yes	Both
18:00	470	249	EB	500-No	150-Yes	Minor	750-No	75-Yes	Minor	600-No	120-Yes	Minor
19:00	372	205	EB	500-No	150-Yes	Minor	750-No	75-Yes	Minor	600-No	120-Yes	Minor
20:00	326	181	EB	500-No	150-Yes	Minor	750-No	75-Yes	Minor	600-No	120-Yes	Minor
21:00	201	135	EB	500-No	150-No	---	750-No	75-Yes	Minor	600-No	120-Yes	Minor
22:00	223	77	EB	500-No	150-No	---	750-No	75-Yes	Minor	600-No	120-No	---
23:00	51	48	EB	500-No	150-No	---	750-No	75-No	---	600-No	120-No	---



MEMORANDUM

TO: Carl E. Geffken, City Administrator
CC: Jeff Dingman, Deputy City Administrator
FROM: Lance A. McAvoy, Water Utilities Director
DATE: August 22, 2023
SUBJECT: Water Systems 2023 CIP Maintenance and Improvements Update

SUMMARY

The Water Utilities has three (3) distinct, separate capital improvement plans (CIPs). Utilities divides the CIPs into Water, Non-CD Wastewater, And Consent Decree . This is to allow for better transparency for the Board of Directors and the public. By breaking the CIPs into these three (3) groups, it is easier to determine the allocation of revenue and capital spending needed or actually encumbered for each of the groups. For the most part our CIP projects are overseen by our Water Utilities Engineering Division, with a few of the projects being lead by other divisions and receiving support from the Engineering Division. It is important to note that the CIP is a plan for capital projects. Often projects are moved due to unforeseen funding shortfalls, ARDoT projects, regulatory requirements, or emergency needs.

The 2023 Water CIP status update is attached. The information in the update is current through August 2, 2023. Of the projects listed, eight (8) of the projects were in the original 2023 Water CIP and two (2) were added due to work ARDoT is currently performing. Due to timing of certain projects, ARDoT projects are moved and Water Utilities is flexible and adaptable to handle these projects as they come. Most of the time these projects are also 100% reimbursable projects. This means the Utilities funds the design and construction of our portion of the project upfront, and once completed, ARDoT reimburses the Utilities for the cost incurred and the money can be utilized for another project.

Currently only two projects listed in the 2023 Water CIP have not begun.

The first one is Project 19-12 Hwy-45 Utility Water Line Relocation which is an ARDoT 85% reimbursable project. This project is waiting on a letter from ARDoT to allow bidding the project. Once bid, the project will realign the water utilities so ARDoT may widen Hwy 45. The second project is 21-13 Neighborhood Water System Improvements/Water Line Replacement Phase I. This project was initially placed in the 2023 Water CIP with the hopes of receiving additional ARPA funds from the state to help offset the cost. The project will replace a portion of galvanized water lines. This project is currently on hold.

Other projects that are not on the CIP list but may need funding include Lead Service Line Inventory (required for compliance with the Revised Lead & Copper Rule), and design and construction of a portion of the transmission line that will be placed on the I-49 bridge.

Water Utilities continues to look at value engineering and long term solutions. As the infrastructure continues to age, Utilities will move forward to strategically address the needs and growth of our City and region.

If you or members of the Board have any questions or desire additional information, please let me know.

ATTACHMENTS

1. [2023 Water CIP Update 20230906.pdf](#)

2023 Water CIP Update
September 2023

Project Title	Funding Source	2023 Projection	Multiple Year Project	Started	Progress	Contract/Agreement Amount	Total Contract/Agreement Spent	Legal, Easements, Filings, Materials, Miscellaneous Spent	Total Completed Project Cost
18-20 LFS 48 inch Transmission Line Phase 3 (Design)	2018 Bond	\$ 700,000	Yes	Yes	On-Going	\$ 1,756,833.00	\$ 1,128,853.30	\$ 155,740.57	
18-21 LFS 48 inch Transmission Line Phase 4 (Design)	2018 Bond	\$ 500,000	Yes	Yes	On-Going	\$ 733,042.00	\$ 245,445.18	\$ 224.00	
19-03 LFS 48 inch Transmission Line Phase 5 (Design)	2018 Bond	\$ 2,250,000	Yes	Yes	On-Going	\$ 1,827,533.00	\$ 630,614.76	\$ 26,367.10	
21-10 ARDoT Lee Creek Transmission Line Project (Reimbursable)	2018 Bond	\$ 1,000,000	Yes	Yes	On-Going	\$ 897,610.00	\$ 458,255.71	\$ 444.22	
23-05 Frog Bayou/ Stream Bank Restoration - Frog Bayou Watershed (Murdoch/Pense Phase1) (Grant Funding ~ \$130,000)	6505 CIP	\$ 290,000	Yes	Yes	On-Going	\$ 248,983.50	\$ 76,949.63	\$ 2,409.90	
23-02 Woods Tank Painting (ArcBest) (Reimbursement)	Excess Sales Tax	\$ 750,000	No	Yes	Completed	\$ 371,670.00	\$ 371,670.00	\$ -	\$ 371,670.00
19-12 Hwy 45 Utility Water Line Relocation (85% Reimbursable)	2018 Bond	\$ 9,100,000	Yes	No	On-Going	\$ 628,750.00	\$ 628,651.05	\$ 248,590.00	
21-13 Neighborhood Water System Improvements/Water Line Replacement Phase I	2018 Bond	\$ 6,902,000	Yes	No	On-Going	\$ 338,255.00	\$ 314,037.84	\$ -	
23-14 I-49 & Hwy 22 Transmission Line Realignment Design	Excess Sales Tax		Yes	Yes	Started	\$ 73,947.00	\$ -	\$ -	
23-06 Hwy 255 18-Inch Water Line Relocation	6505 CIP		Yes	Yes	Started	\$ 39,480.00	\$ 38,667.04	\$ 30.00	

Completed on 09/06/2023



MEMORANDUM

TO: Carl E. Geffken, City Administrator
CC: Jeff Dingman, Deputy City Administrator
FROM: Lance A. McAvoy, Water Utilities Director
DATE: August 22, 2023
SUBJECT: Wastewater Systems 2023 CIP Maintenance and Improvements (Non-Consent Decree)

SUMMARY

The Water Utilities has three (3) distinct, separate capital improvement plans (CIPs). Utilities divides the CIPs into Water, Non-CD Wastewater, And Consent Decree. This is to allow for better transparency for the Board of Directors and the public. By breaking the CIPs into these three (3) groups, it is easier to determine the allocation of revenue and capital spending needed or actually encumbered for each of the groups. For the most part our CIP projects are overseen by our Water Utilities Engineering Division, with a few of the projects being lead by other divisions and receiving support from the Engineering Division. It is important to note that the CIP is a plan for capital projects. Often projects are moved due to unforeseen funding shortfalls, ARDoT projects, regulatory requirements, or emergency needs.

The 2023 Non-CD Wastewater CIP status update is attached. The information in the update is current through August 31, 2023. Currently Project 20-21 Riverfront Sewer Utility Extension is just waiting final paperwork to be completed.

The only project listed in the 2023 Non-CD Wastewater CIP that has not begun is Project 19-12 Hwy-45 Utility Water Line Relocation which is an ARDoT 85% reimbursable project. This project is waiting on a letter from ARDoT to allow bidding the project. Once bid, the project will realign the sewer utilities so ARDoT may widen Hwy 45.

One project not on the CIP list but has sought funding is the Massard Treatment Plant, which was taken to the Board of Directors on September 5, 2023.

Water Utilities continues to look at value engineering and long-term solutions. As the infrastructure continues to age, Utilities will move forward to strategically address the needs and growth of our City and region.

If you or members of the Board have any questions or desire additional information, please let me know.

ATTACHMENTS

1. [2023 Non-CD Wastewater CIP Update 20230906.pdf](#)

2023 Non-CD Wastewater CIP Update
September 2023

Project Title	Funding Source	2023 Projection	Multiple Year Project	Started	Progress	Contract/Agreement Amount	Life Todate Total Contract/Agreement Spent	Life Todate Total Legal, Easements, Filings, Materials, Miscellaneous Spent	Total Completed Project Cost
19-29 Flood Recovery (FEMA)	2018 Bond/2018 6505 CIP	\$ 3,000,000	Yes	Yes	On-Going	\$ 15,626,734.27	\$ 15,433,271.75	\$ 29,933.72	\$ 15,463,205.47
19-12 Hwy 45 Utility Sewer Line Relocation (85% Reimbursable)(Bond)	2018 Bond	\$ 1,000,000	Yes	No	Design	\$ 628,750.00	\$ 628,651.05	\$ 249,790	
20-21 Riverfront Sewer Utility Extention	2018 Bond/2018 6505 CIP	\$ 668,000	Yes	Yes	On-Going	\$ 2,293,305.00	\$ 2,046,999.20	\$ 9,763.37	
Massard Plant Study (Ammonia)	6505 CIP	\$ -	No	Yes	Study	\$ 145,000	\$ -	\$ -	

Completed on 09/06/2023



MEMORANDUM



TO: Carl E. Geffken, City Administrator
CC: Jeff Dingman, Deputy City Administrator
FROM: Lance A. McAvoy, Water Utilities Director
DATE: August 22, 2023
SUBJECT: Wastewater Systems 2023 CIP Maintenance and Improvements (Consent Decree)

SUMMARY

The Water Utilities has three (3) distinct, separate capital improvement plans (CIPs). Utilities divides the CIPs into Water, Non-CD Wastewater, And Consent Decree. This is to allow for better transparency for the Board of Directors and the public. By breaking the CIPs into these three (3) groups, it is easier to determine the allocation of revenue and capital spending needed or actually encumbered for each of the groups. For the most part our CIP projects are overseen by our Water Utilities Engineering Division, with a few of the projects being lead by other divisions and receiving support from the Engineering Division.

The 2023 Consent Decree CIP status update is attached. The information in the update is current through August 2, 2023. Currently many of the projects listed are on-going and some are nearing completion.

Project there are some construction projects that will be bundled out of 2023 Consent Decree CIP with proposed 2024 Consent Decree CIP Projects. These projects will be bid in late August or early September 2023 once Water Utilities has received enough SUT funds to bid a large project. The hope is to attract additional construction contractors to bid and to find an affordability in scale often seen with large projects.

Three (3) projects have been funded that were not originally in the 2023 Consent Decree CIP. These projects are 23-09 Continuing Capacity Assurance Evaluation, 19-23 Basin 12 Remedial Measures Phase 3 (Design & Construction), and 23-07 Basin 10 & 14 Construction Phase 3 (Design). The reason for moving the first two projects forward were to ensure the City could meet the deadlines of the Consent Decree. The design project for Basin 10 & 14 Construction Phase 3 provides the City with the opportunity to eliminate wet-weather SSOs once the project is constructed.

A large additional amount was put towards project 23-13 2023/2024 SSA Work. This was done to ensure the SSA work would be concluded by the end of 2024.

As Water Utilities looks at ways to spend wisely, the Large Sewer Line Structural Analysis Project was cancelled and rolled into the 23-13. This allowed for a more expeditious project

and a level of continuity between the SSA work being performed.

Water Utilities continues to look at value engineering and long term solutions. The Utilities are committed to working to comply with the Consent Decree and reduce and eliminate SSOs.

If you or members of the Board have any questions or desire additional information, please let me know.

ATTACHMENTS

1. [2023 Consent Decree CIP Update 20230906.pdf](#)

2023 Consent Decree CIP Update
September 2023

Project Title	Funding Source	2023	Started	Progress	Contract/Agreement Amount	Total Contract/Agreement Spent	Legal, Easements, Filings, Materials, Miscellaneous Spent	Total Completed Project Cost
21-19 B Street South Sewer Upgrade	2018 Bond	\$ 437,500	yes	On-Going	\$ 6,500.00	\$ 6,500.00	\$ -	
20-18 Rogers Avenue Sewer Realignment	2018 Bond/6505 CIP	\$ 1,100,000	No	Completed	\$ 1,177,490.00	\$ 1,108,298.21	\$ 30,736.16	\$ 1,139,034.37
17-09 2016 SSA Remedial P005 (Construction)		\$ 1,500,000	No					
17-13 2016 SSA Remedial P008 (Construction)	6505 CIP/	\$ 5,500,000	No					
17-11 2016 SSA Remedial S006 (Construction)	6505 CIP/2018 Bond	\$ 2,812,500	No		\$ 358,600.00	\$ 358,509.88	\$ -	
17-12 2016 SSA Remedial S007 (Construction)		\$ 3,750,000	No					
19-20 2017 Basin Z001 Remedial Measures (Design and Construction)	2018 Bond	\$ -	No	Design Completed	\$ 381,938.00	\$ 380,987.34		
Large Sewer Line Structural Analysis Project	Removed from CIP Duplicate Work	\$ 625,000	No					
20-07 2015 SSA Remedial Measures CIPP	2018 Bond	\$ 2,500,000	Yes	On-Going	\$ 3,072,885.71	\$ 2,266,056.65	\$ 521.07	
CIPP/Contract Cleaning Program		\$ 2,500,000	No					\$ 1,139,034.37
23-13 2023/2024 SSA Work	Excess SUT	\$ 125,000	yes	On-Going	\$ 2,785,397.46			
23-08 Continuing Pump Station & Force Main Evaluation	Excess SUT	\$ 2,400,000	Yes	On-Going	\$ 467,500.00	\$ -	\$ -	
23-09 Continuing Capacity Assurance Evaluation	Excess SUT	\$ -	Yes	Started	\$ 365,363.00	\$ 237,871.77	\$ -	
17-10 SSA Basin 12 Phase 1&2	6505 CIP/2018 Rev Bonds/2021 ARPS Funds/ 6505 Excess SUT	\$ 2,812,500	Yes	On-Going	\$ 2,700,160.30	\$ 766,096.12	\$ 312.60	
19-23 Basin 12 Remedial Measures Phase 3 (Design & Construction)	218 Bond/ Excess SUT	\$ 3,750,000	yes	On-Going	\$ 1,693,769.00	\$ 427,425.24	\$ 84.00	
21-22 Basin 10 & 14 Construction Phase 1 (Construction)(ARPA Funded)	2021 ARPS	\$ 7,000,000	Yes	On-Going	\$ 13,662,047.11	\$ 11,928,353.52	\$ 4,330.00	
Basin 10 & 14 Construction Phase 2 (Construction)(ARPA Funded)		\$ 7,812,500	No					\$ 1,139,034.37
23-07 Basin 10 & 14 Construction Phase 3 (Design and Construction)	Excess SUT	\$ -	Yes	On-Going	\$ 144,300.00	\$ 101,648.00	\$ -	
21-03 Pump Station #6 Rehabilitation & Capacity	6505 CIP/ 2018 Bonds	\$ 400,000	Yes	On-Going	\$ 2,974,596.12	\$ 2,614,422.01	\$ 123,293.68	
23-17 Consent Decree Stipulated Penalties	6505 CIP	\$ -	yes	On-Going	\$ 800,000.00	\$ 800,000.00		\$ 800,000.00
20-15 Skyline Estates Capacity Improvements	2018 Bonds/ 6505 CIP/In-house	\$ 475,000	Yes				\$ 10,630.43	

Completed on 09/06/2023