

ENGINEERING SERVICES AGREEMENT

JAN 30 2018

THIS IS AN AGREEMENT made as of , ~~2017~~, between the LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT (**OWNER**) and Hazen and Sawyer, 230 Lexington Green Circle, Suite 520, Lexington, KY (**CONSULTANT**). **OWNER** intends to proceed with the Investigation/Design Services for West Hickman WWTP Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection as described in the attached Exhibit A, "**RFP #41-2017 Investigation/Design Services for West Hickman WWTP Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection**". The services are to include customary civil, sanitary, geotechnical, mechanical, structural, and electrical engineering services as related to completion and submission of reports and deliverables as described in Exhibit A, detailing the findings of all field inspections, inventory and required analysis completed by the **CONSULTANT**. The services are hereinafter referred to as the **PROJECT**.

OWNER and **CONSULTANT** in consideration of their mutual covenants herein agree in respect of the performance of professional engineering services by **CONSULTANT** and the payment for those services by **OWNER** as set forth below.

CONSULTANT shall provide professional consulting 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 consultation and advice to **OWNER** during the performance of services hereunder.

SECTION 1 - BASIC SERVICES OF CONSULTANT

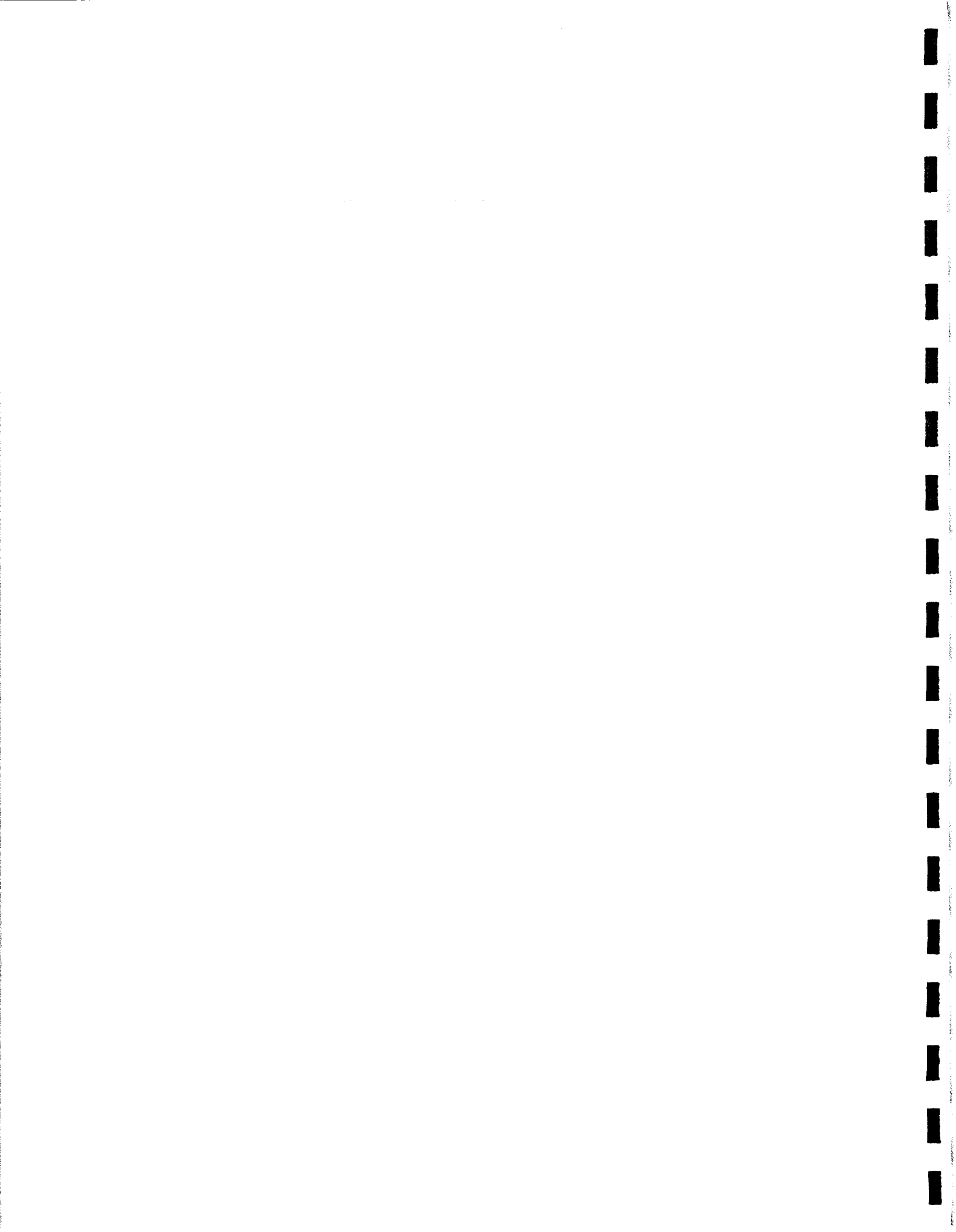
1.1. General

CONSULTANT shall perform professional services as hereinafter stated that include customary civil, geotechnical, structural, mechanical, electrical and sanitary engineering services incidental thereto.

1.2. Project Phase

After written authorization to proceed, **CONSULTANT** shall:

- 1.2.1. Notify the **OWNER** in writing of its authorized representative who shall act as Project Engineer and liaison representative between the **CONSULTANT** and the **OWNER**.
- 1.2.2. The **CONSULTANT** must perform all duties necessary to fully complete the deliverables described in attached Exhibit A " Investigation/Design Services for West Hickman WWTP Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection; RFP #41-2017" (including Addendums 1-6),

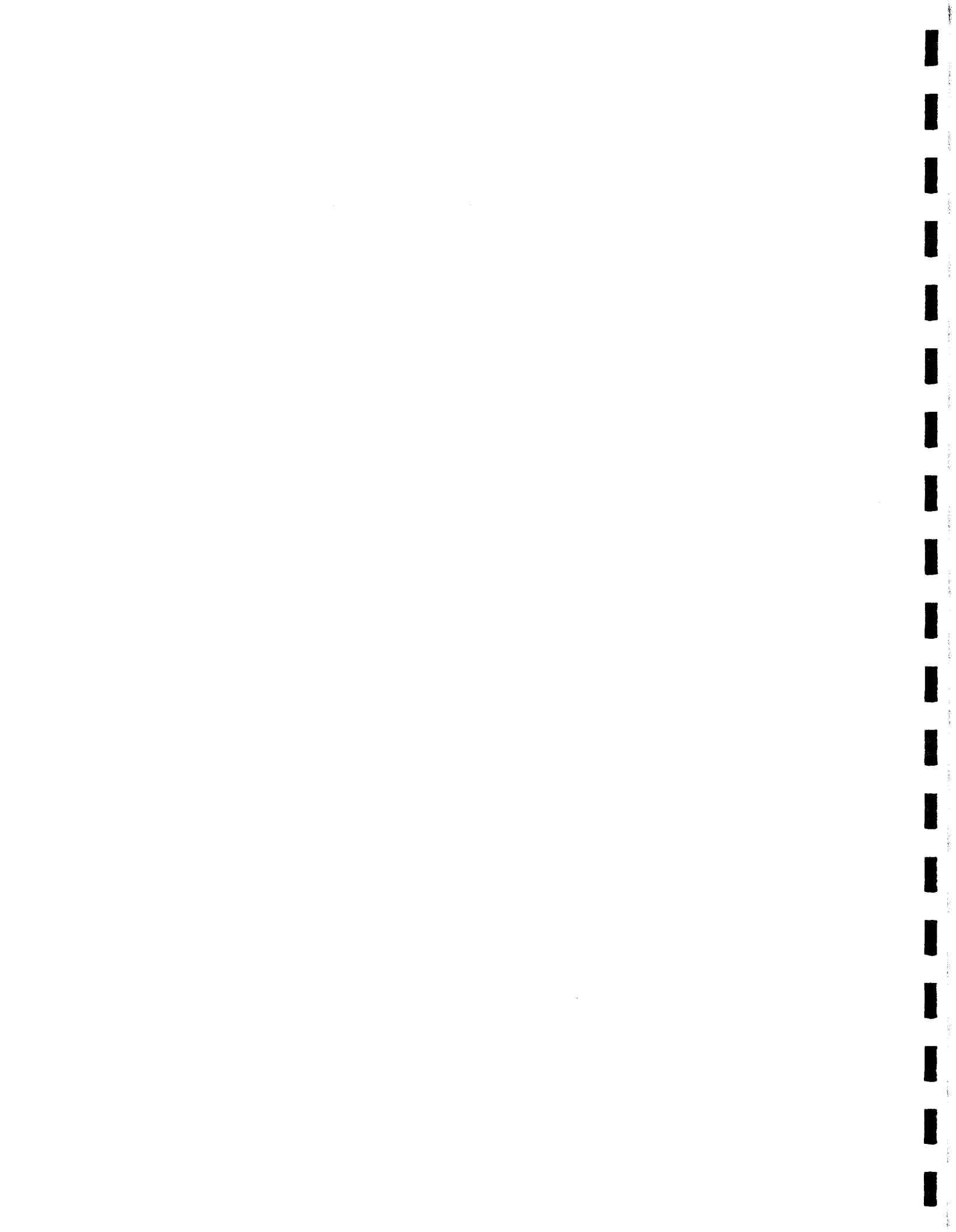


and attached Exhibit C the "Proposal of Engineering Services and Related Matters" (the CONSULTANT's response to RFP #41-2017). To the extent of any conflict among the provisions of these documents and/or this Agreement, the provisions of this Agreement shall control, followed by the provisions of EXHIBIT A, and then EXHIBIT C.

- 1.2.3 The CONSULTANT shall provide written documentation of all meetings and be responsible for incorporating all comments and changes resulting therefrom in final work product.
- 1.2.4. The CONSULTANT shall post all initial draft work products on the project document management portal. If the project document management portal is not functional on the draft posting date, the CONSULTANT shall submit five (5) copies (hardcover) of all initial draft final work products for this PROJECT. The copies of the initial draft final reports are submitted for review and comment by the OWNER, and should be presented in person to the OWNER.
- 1.2.5. After the OWNER'S detailed review, the CONSULTANT will revise the initial draft final for all work products for this PROJECT, and the CONSULTANT shall post all draft final work products on the project document management portal. If the project document management portal is not functional on the draft posting date, the CONSULTANT shall five (5) copies (hardcover). One electronic copy of the all work products for this PROJECT, including all appendices, shall be provided and prepared in such a manner that it can readily be converted to a quick-link accessible form for the OWNER'S Website. The OWNER shall have ten (10) business days within which to accept or deny each such final draft. If is denied, the OWNER shall provide a detailed explanation in writing for the basis of such denial. Once the OWNER accepts the draft as final, a total of ten (10) final copies (hardcover) are required in addition to an electronic copy.
- 1.2.6 Immediately notify OWNER of any delay in the delivery of a work product or deliverable, regardless of cause. Give written notice to OWNER within five (5) business days whenever CONSULTANT observes or otherwise becomes aware of any development that affects the scope or timing of CONSULTANT'S services, or any defect in the work of Contractor(s).

SECTION 2 - EXTRA WORK BY CONSULTANT

- 2.1. The OWNER may desire to have the CONSULTANT perform work or render services in connection with this PROJECT other than provided by the expressed intent of this Agreement. Such work shall be considered as "Extra Work", subject to a change order, supplemental to this Agreement, setting forth the character and scope thereof and the compensation therefore. Work under such change order shall not proceed until the OWNER gives written authorization. Should the OWNER find it desirable to have previously satisfactorily completed and accepted plans or parts thereof revised, the



CONSULTANT shall make such revisions as directed, in writing, by the **OWNER**. This work shall be considered as "Extra Work" and shall be paid as such.

- 2.2. All "Extra Work" is subject to prior written authorization of **OWNER** and necessary appropriations made by the Urban County Council.

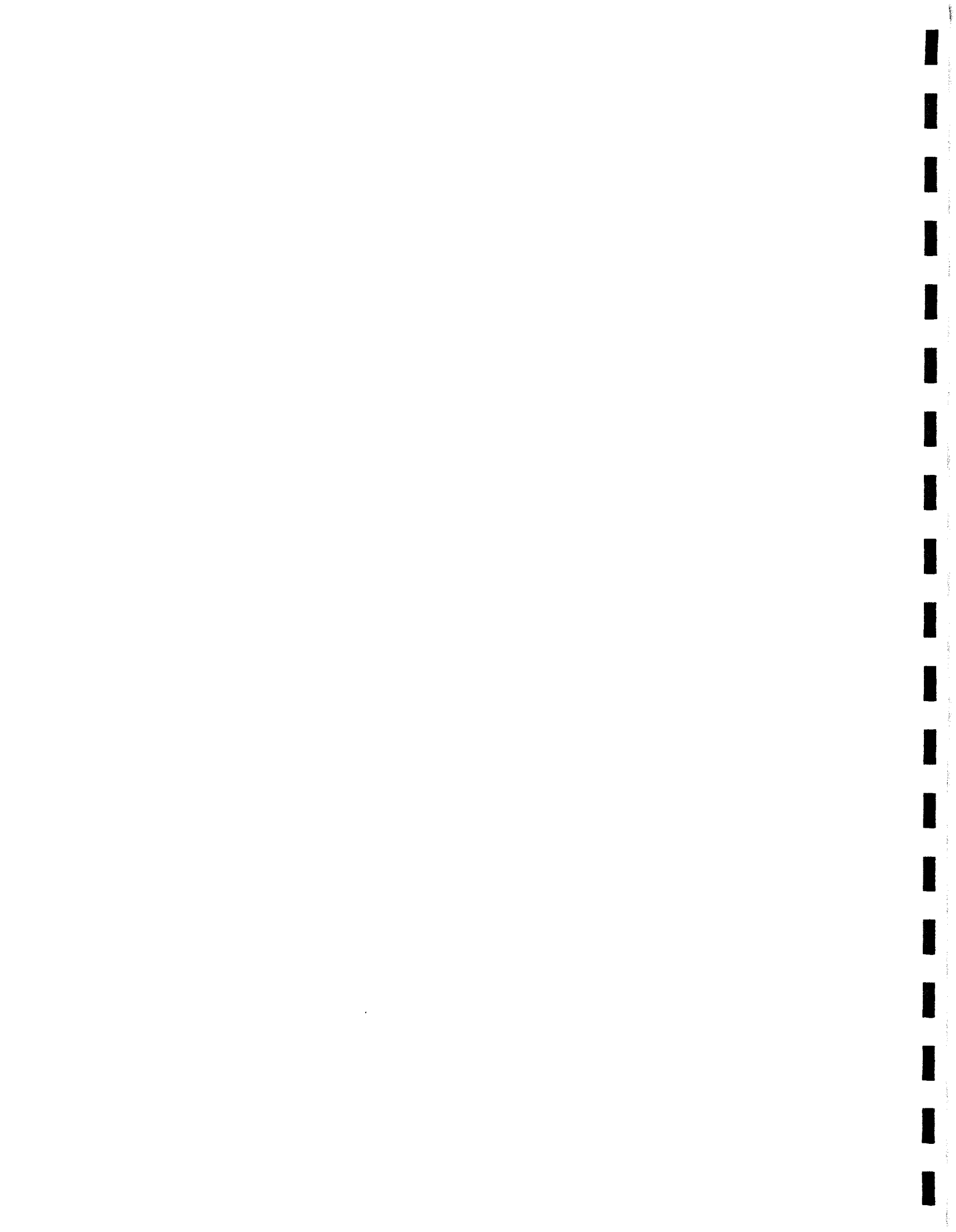
SECTION 3 - OWNER'S RESPONSIBILITIES

OWNER shall:

- 3.1. Provide criteria and information as to **OWNER'S** requirements for the **PROJECT**, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations.
- 3.2. Assist **CONSULTANT** by placing at his disposal available information pertinent to the Project.
- 3.3. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by **CONSULTANT**, and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of **CONSULTANT**.
- 3.4. 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, interpret, and define **OWNER'S** policies and decisions with respect to materials, equipment, elements, and systems pertinent to **CONSULTANT'S** services.
- 3.5. Give written notice to **CONSULTANT** whenever **OWNER** observes or otherwise becomes aware of any development that affects the scope or timing of **CONSULTANT'S** services, or any defect in the work of Contractor(s).
- 3.6. Furnish or direct **CONSULTANT** to provide, necessary Extra Work as stipulated in Section Two (2) of this Agreement or other services as required.

SECTION 4 - PERIOD OF SERVICES

- 4.1. Time is of the essence in the performance of this Agreement. See attached Exhibit D "Further Description of Basic Engineering Services and Related Matters" for the project schedule.
- 4.2. The provisions of this Section Four (4) and the various rates of compensation for **CONSULTANT'S** services provided for elsewhere in this Agreement have been agreed to in anticipation of the orderly and continuous progress of the **PROJECT** through completion.
- 4.3. If a delay results from the acts of **OWNER** or another entity that is required to permit or approve the work or services, an extension of time for such delay will be considered by **OWNER**.



- 4.3.1. If the above type of delay occurs and **CONSULTANT** wants an extension of time, it must, within ten (10) days from the date of the delay, apply in writing to **OWNER** for an extension of time for a reasonable period, which must be agreed upon by **OWNER**.
- 4.3.2. If the extension of time is approved by **OWNER**, the **PROJECT** schedule shall be revised to reflect the extension. Such extension of time to the completion date shall in no way be construed to operate as a waiver on the part of **OWNER** of any of its other rights in the Agreement.
- 4.3.3. If the above type of delay would prevent complete performance of the **PROJECT** within ninety (90) days of the time specified therein, **OWNER** shall have the option of cancelling the **PROJECT** or otherwise adjusting the scope of the services or work and any related fees.
- 4.3.4. If the parties cannot mutually agree to an extension of time or an adjustment, Section 6.5 under "DISPUTES" of this Agreement shall apply.

4.4. If delays result solely by reason of acts of the **CONSULTANT**, the **CONSULTANT** must immediately notify the **OWNER** in the event of such delay, and provide the **OWNER** a written action plan within five (5) business days on how it will reasonably attempt to resolve the delay. If the parties cannot mutually agree to an extension of time or an adjustment, Section 6.5 under "DISPUTES" of this Agreement shall apply. If the above type of delay would prevent complete performance of the **PROJECT** within ninety (90) days of the time specified therein, **OWNER** shall have the option of cancelling the **PROJECT** or otherwise adjusting the scope of the services or work and any related fees.

SECTION 5 - PAYMENTS TO CONSULTANT

5.1. Methods of Payment for Services of CONSULTANT.

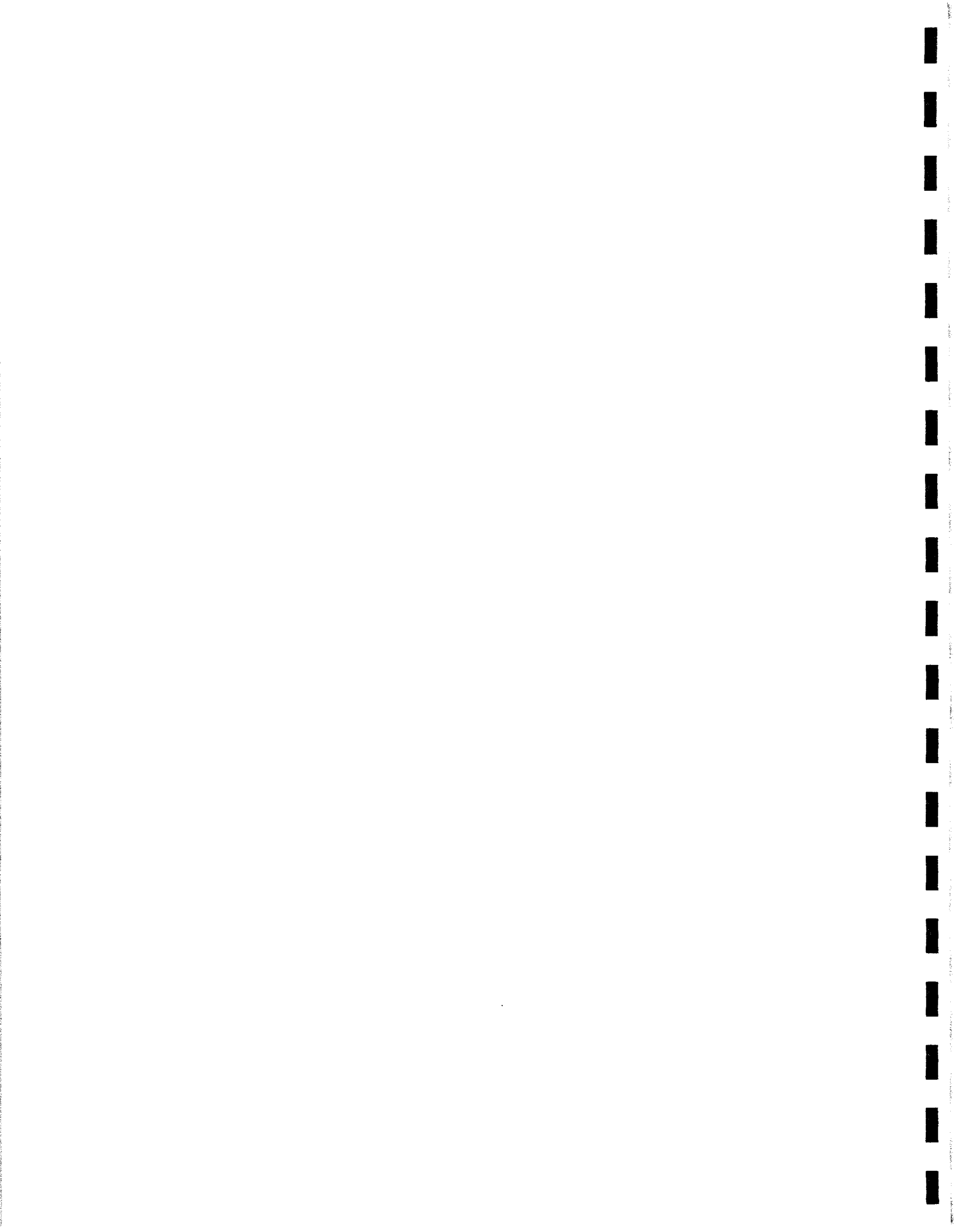
5.1.1. For Basic Services

OWNER shall pay **CONSULTANT** a lump sum amount not to exceed \$179,835.00.

5.2. Times of Payment

5.2.1. **CONSULTANT** shall submit monthly statements for Basic Services and Extra Work rendered. The Statements will be based upon **CONSULTANT'S** estimate of the proportion of the total services actually completed at the time of billing. **OWNER** shall respond to **CONSULTANT'S** monthly statements within thirty (30) days, either denying payment or making payment.

5.3. Other Provisions Concerning Payments



- 5.3.1. In the event the Agreement is terminated by the **OWNER** without fault on the part of the **CONSULTANT**, the **CONSULTANT** shall be paid for the work performed or services rendered for which it has not already been paid as determined by mutual agreement between the **OWNER** and the **CONSULTANT**.
- 5.3.2. In the event the services of the **CONSULTANT** are terminated by the **OWNER** for fault on the part of the **CONSULTANT**, the **CONSULTANT** shall be paid reasonable value of the work performed or services rendered and delivered for which it has not already been paid, and the amount to be paid shall be determined by the **OWNER**.

SECTION 6 - GENERAL CONSIDERATIONS

6.1. Termination

- 6.1.1. **CONSULTANT may only terminate this Agreement** due to **OWNER'S** material breach of the terms hereof which breach causes **CONSULTANT** to be unable to perform its duties and responsibilities under this Agreement and upon forty-five (45) days written advance notice to **OWNER**.
- 6.1.2. The **OWNER** may terminate this Agreement for cause upon seven (7) business days written advance notice to the **CONSULTANT**. The **OWNER** reserves the right to terminate the Agreement for any reason whatsoever, with or without cause, at any time upon thirty (30) days written advance notice to the **CONSULTANT**.

6.2. Ownership and Reuse of Documents

All documents, including raw data, reports, Drawings and Specifications, prepared by the **CONSULTANT** pursuant to this Agreement shall be delivered to and become the property of the **OWNER**. The **OWNER** shall have the right to reuse same without restriction or limitation, but without liability or legal exposure to **CONSULTANT**.

6.3. Legal Responsibilities and Legal Relations

- 6.3.1. The **CONSULTANT** shall familiarize himself with and shall at all times comply with all federal, state, and local laws, ordinances, and regulations that in any manner affect the services of this Agreement.
- 6.3.2. In performing the services hereunder, the **CONSULTANT** and its consultants, employees, agents and representatives shall not be deemed or construed to be employees of **OWNER** in any manner whatsoever. Except as otherwise provided in this Agreement, the **CONSULTANT** shall be acting as an independent contractor. The **CONSULTANT** shall not hold itself out as, nor claim to be, an officer or employee of **OWNER** by reason hereof and shall not make any claim, demand or application to or for any right or privilege applicable to an officer or employee of



OWNER. The **CONSULTANT** shall be solely responsible for any claims for wages or compensation by **CONSULTANT'S** employees, agents and representatives, including consultants, and shall save and hold **OWNER** harmless therefrom.

6.3.3. The parties hereto agree that causes of actions between the parties shall be governed by applicable provisions of the Kentucky Revised Statutes, and that venue of any legal action shall be a court of appropriate jurisdiction in Fayette County, Kentucky. The parties further agree that Kentucky law shall apply with respect to the interpretation of any provision of this Agreement.

6.4. Successors and Assigns

6.4.1. **CONSULTANT** binds itself and his partners, successors, executors, administrators, assigns and legal representatives to this Agreement in respect to all covenants, agreements, and obligations of this Agreement. **CONSULTANT** shall not assign any interest, obligation or benefit in this Agreement. **CONSULTANT** shall not assign any interest, obligation or benefit in this Agreement nor transfer any interest in the same, whether by assignment or novation, without prior written consent of **OWNER**.

6.4.2. The **CONSULTANT** shall not subcontract more than fifty percent (50%) of the work, based upon dollar value of the work. The **CONSULTANT** shall obtain written approval prior to subletting or assigning any services contained in this Agreement, and consent to sublet or assign any part of this Agreement shall not be construed to relieve the **CONSULTANT** of any responsibility for compliance with the provisions of this Agreement.

6.4.3. Nothing herein shall be construed to give any rights or benefits hereunder to anyone other than **OWNER** and **CONSULTANT**.

6.5. Disputes

Except as otherwise provided in this Agreement, any dispute hereunder may be resolved by agreement of the **OWNER'S** Agent (Section 8.1.1) and the **CONSULTANT**. In the absence of such an agreement, the dispute shall be submitted to the **OWNER'S** Commissioner, Department of Environmental Quality & Public Works, whose decision shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, capricious, arbitrary, or so grossly erroneous as necessarily to imply bad faith. Pending a final decision of a dispute hereunder, the **CONSULTANT** shall proceed diligently with the performance of the Agreement in accordance with the directions of the **OWNER**.



6.6. Accuracy of CONSULTANT'S Work

The **CONSULTANT** shall be required to perform this Agreement in accordance with the degree of ordinary and reasonable skill and care usually exercised by professional engineers prevailing at the time, place and under similar conditions as the services hereunder are rendered.

The **CONSULTANT** shall be responsible for the accuracy of all work, even though raw data, reports, Drawings and Specifications have been accepted by the **OWNER**, and it shall make any necessary revisions or corrections resulting from its errors and/or omissions for no additional compensation. By submission of reports, soils and subsurface information, quantities estimates, calculations and Drawings and Specifications to the **OWNER**, the **CONSULTANT** has made an incontrovertible representation that the information is accurate within the appropriate standard of skill and care.. Failure on the part of **CONSULTANT** to provide the expected level of accuracy may be grounds for the **OWNER** to terminate this Agreement.

6.7. Security Clause

The **CONSULTANT** certifies that he shall not at any time release or divulge any information concerning the services covered by this Agreement to any person or any public or private organization except the **OWNER** without prior approval of the **OWNER** unless required by law

6.8. Access to Records

The **CONSULTANT** and his sub-consultants shall maintain all books, documents, papers, and accounting records, and make such materials available at their respective offices at all reasonable times during the Agreement period and for three (3) years from the date of final payment under the Agreement for inspection by the **OWNER**, and copies thereof shall be furnished if requested. Failure to maintain such records for three (3) years after the date of final payment may be grounds for the **OWNER** to disqualify the **CONSULTANT** from consideration for future consultant engineering Agreements.

6.9. Risk Management Provisions, Insurance and Indemnification

6.9.1. DEFINITIONS

The **CONSULTANT** understands and agrees that the Risk Management Provisions of this Agreement define the responsibilities of the **CONSULTANT** to the **OWNER**.

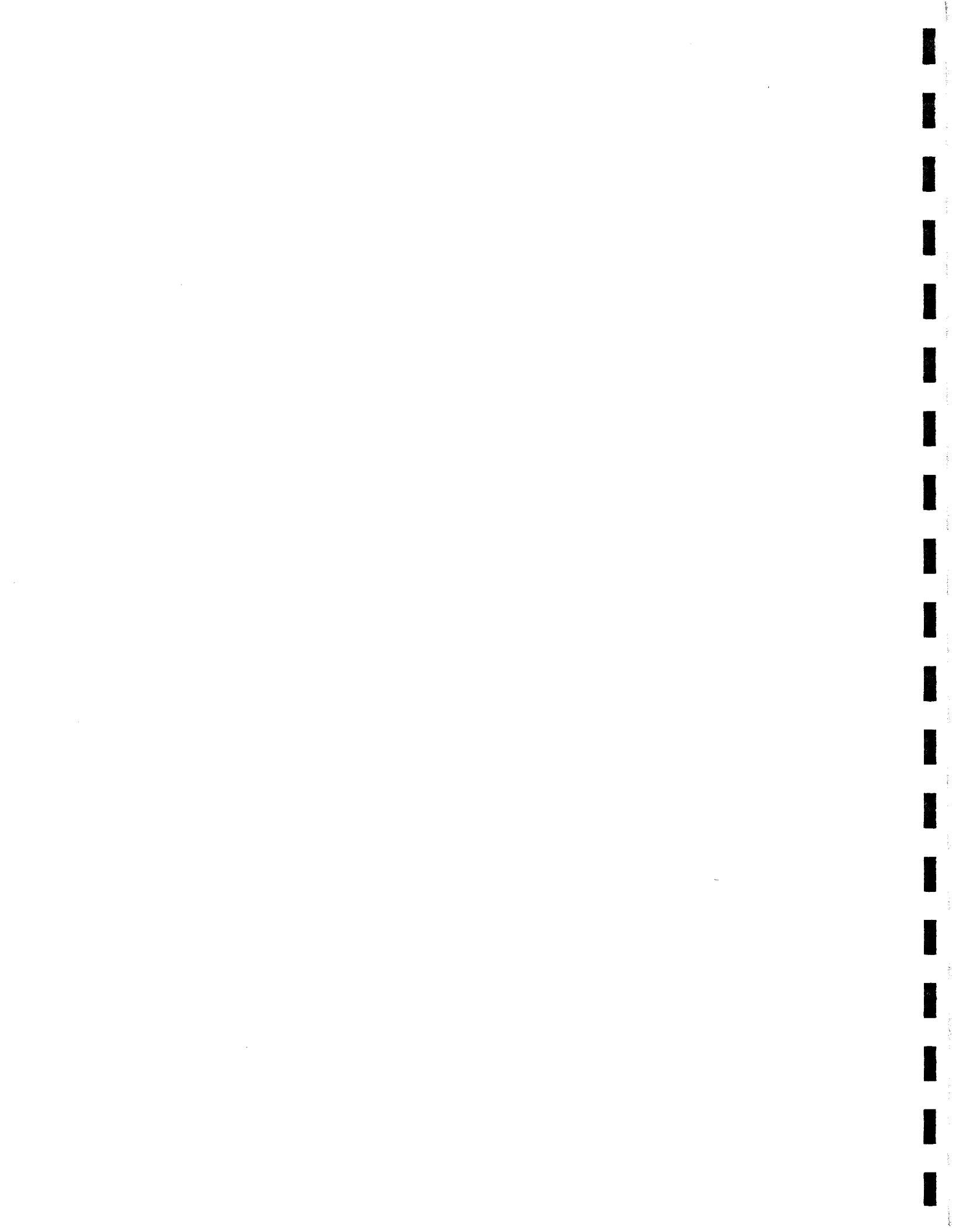
As used in these Risk Management Provisions, the terms “**CONSULTANT**” and “**OWNER**” shall be defined as follows:



- a. **CONSULTANT** means the consultant and its employees, agents, servants, owners, principals, licensees, assigns and subcontractors of any tier.
- b. **OWNER** means the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, boards, assigns, volunteers, and successors in interest.

6.9.2. INDEMNIFICATION AND HOLD HARMLESS PROVISION

- a. It is understood and agreed by the parties that **CONSULTANT** hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of **CONSULTANT** or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "**CONSULTANT**") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.
- b. **CONSULTANT** shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "**OWNER**") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by **CONSULTANT**'s performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the **CONSULTANT**; and (b) not caused solely by the active negligence or willful misconduct of **OWNER**.
- c. Notwithstanding, the foregoing, with respect to any professional services performed by **CONSULTANT** hereunder (and to the fullest extent permitted by law), **CONSULTANT** shall indemnify, save, hold harmless and defend **OWNER** from and against any and all liability, damages and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees, for any damage due to death or injury to any person or injury to any property



(including the loss of use resulting therefrom) to the extent arising out of, pertaining to or relating to the negligence, recklessness or willful misconduct of **CONSULTANT** in the performance of this agreement.

- d. In the event **OWNER** is alleged to be liable based upon the above, **CONSULTANT** shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by **OWNER**, which approval shall not be unreasonably withheld.
- e. These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.
- f. **OWNER** is a political subdivision of the Commonwealth of Kentucky. **CONSULTANT** acknowledges and agrees that **OWNER** is unable to provide indemnity or otherwise save, hold harmless, or defend the **CONSULTANT** in any manner.

6.9.3. FINANCIAL RESPONSIBILITY

The **CONSULTANT** understands and agrees that the **CONSULTANT** shall, prior to final acceptance of the **CONSULTANT'S** proposal and the commencement of any work; demonstrate the ability to assure compliance with the Indemnity Agreement and other provisions of this Agreement.

6.9.4. INSURANCE REQUIREMENTS

6.9.4.1. Required Insurance Coverage

CONSULTANT shall procure and maintain for the duration of this Agreement the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to **OWNER** in order to protect **OWNER** against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by **CONSULTANT**. The cost of such insurance shall be included in any proposal:

Coverage

Limits

General Liability
(Insurance Services Office Form CG 00 01)

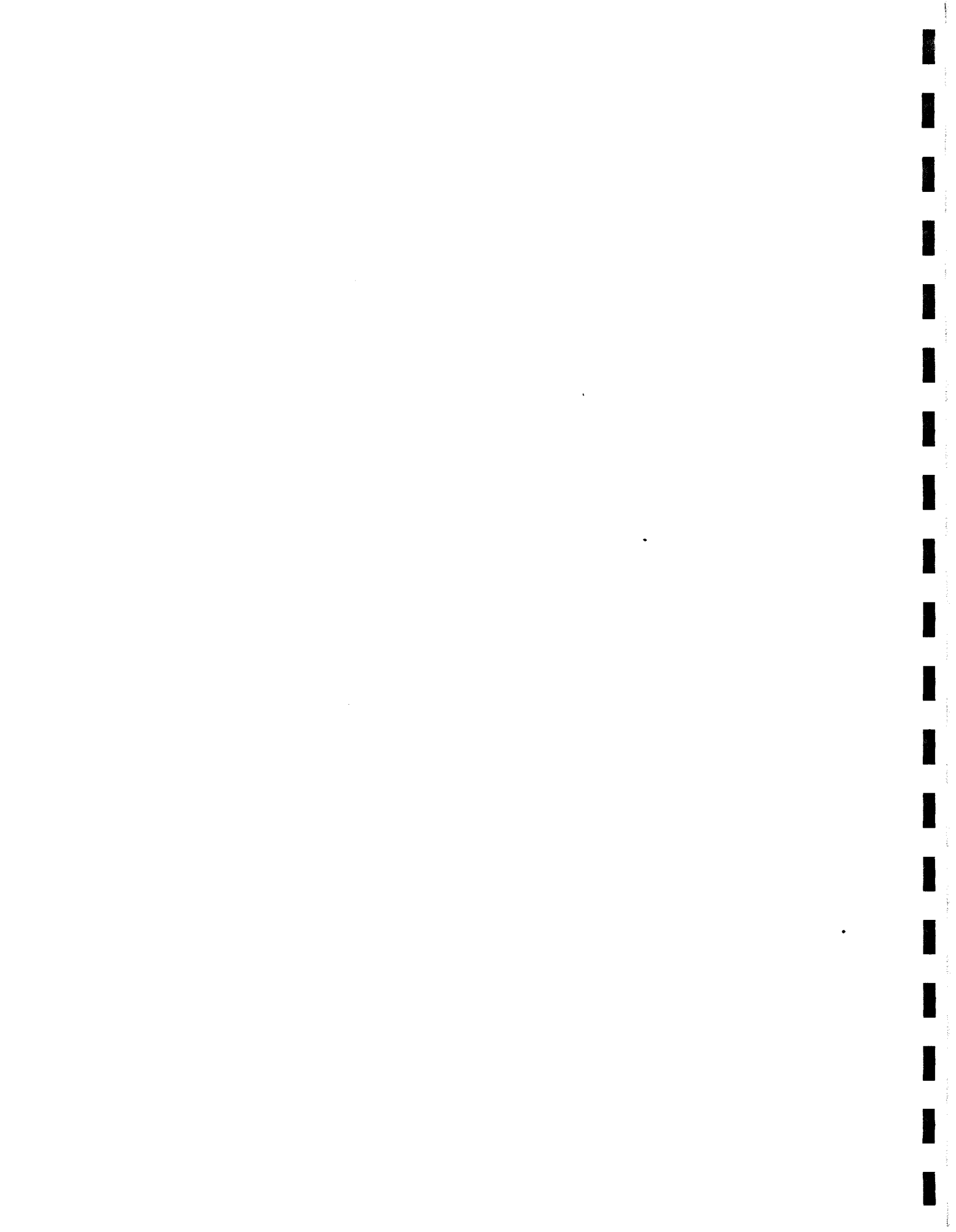
\$1 million per
occurrence, \$2 million aggregate or
\$2 million combined single limit



Commercial Automobile Liability (Insurance Services Office Form CA 0001)	combined single, \$1 million per occurrence
Professional Liability	\$1 million per occurrence, \$2 million aggregate
Worker's Compensation	Statutory
Employer's Liability	\$500,000.00

The policies above shall contain the following conditions:

- a. **OWNER** shall be named as an additional insured in the General Liability Policy and Commercial Automobile Liability Policy.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by **OWNER**.
- c. The General Liability Policy shall include Business Interruption coverage.
- d. The Contractor shall carry Builders Risk coverage at a level sufficient to cover the replacement cost of any equipment or machinery used at the work site, if applicable.
- e. The General Liability Policy shall include a Pollution Liability endorsement and/or Environmental Casualty coverage unless it is deemed not to apply by **OWNER**.
- f. The General Liability Policy shall have a Professional Liability endorsement (including Errors and Omissions), which shall include Business interruption coverage and this policy or endorsement shall include Environmental Casualty coverage for any services performed pursuant to the contract, and/or a separate Professional Liability Policy shall be obtained unless it is deemed not to apply by **OWNER**. (**OWNER** does not need to be named as additional insured).
- g. **OWNER** shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- h. The Professional Liability policy shall be maintained for a minimum of three years beyond the completion date of the project, to the extent commercially available. If not commercially available, **CONSULTANT** shall notify **OWNER** and obtain similar insurance that is commercially available and acceptable to **OWNER**.



- i. Said coverage shall be written by insurers acceptable to **OWNER** and shall be in a form acceptable to **OWNER**. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

6.9.4.2. Renewals

After insurance has been approved by **OWNER**, evidence of renewal of an expiring policy must be submitted to **OWNER**, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

6.9.4.3. Right to Review, Audit and Inspect

CONSULTANT understands and agrees that **OWNER** may review, audit and inspect any and all of **CONSULTANT'S** records and operations to insure compliance with these Insurance Requirements.

6.9.5. SAFETY AND LOSS CONTROL

CONSULTANT shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and **OWNER**.

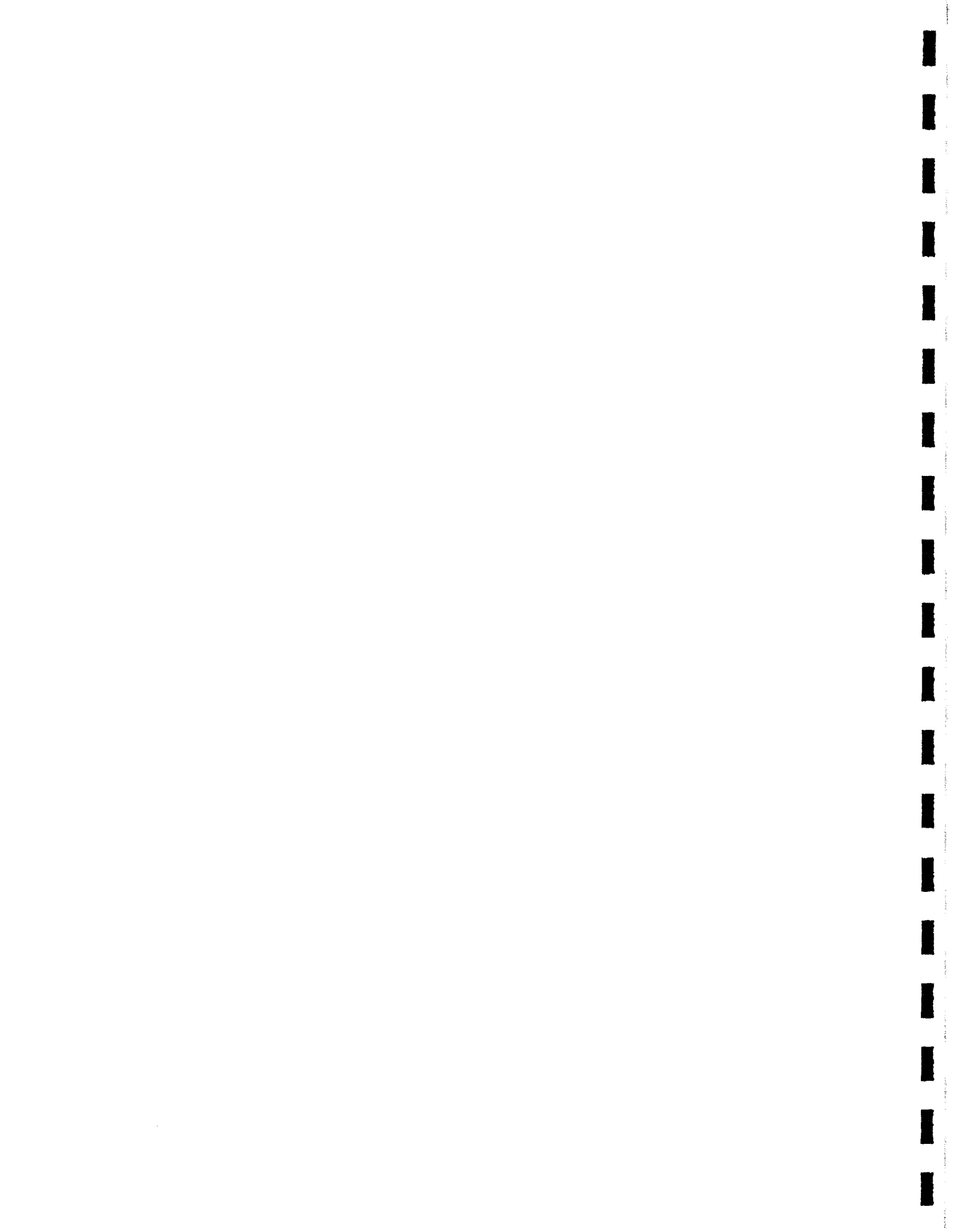
6.9.6. DEFINITION OF DEFAULT

CONSULTANT understands and agrees that the failure to comply with any of these provisions shall constitute default under this Agreement. **CONSULTANT** also agrees that **OWNER** may elect as its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging **CONSULTANT** for any such insurance premiums purchased, or suspending or terminating this Agreement.

SECTION 7 - EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Agreement, the **CONSULTANT** agrees as follows:

- 7.1. The **CONSULTANT** will not discriminate against any employee or application for employment because of race, color, religion, national origin, sex, age, or handicap. The **CONSULTANT** will take affirmative action to ensure that applicants are employed, and



that employees are treated during employment without regard to their race, color, religion, national origin, sex, age, or handicap. Such action shall include, but not be limited to the following: employment upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeships. The **CONSULTANT** agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

- 7.2.1. The **CONSULTANT** will, in all solicitations or advertisements for employees placed by or on behalf of the **CONSULTANT**, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex, age (between forty and seventy), or handicap.

SECTION 8 - SPECIAL PROVISIONS, EXHIBITS, AND SCHEDULES

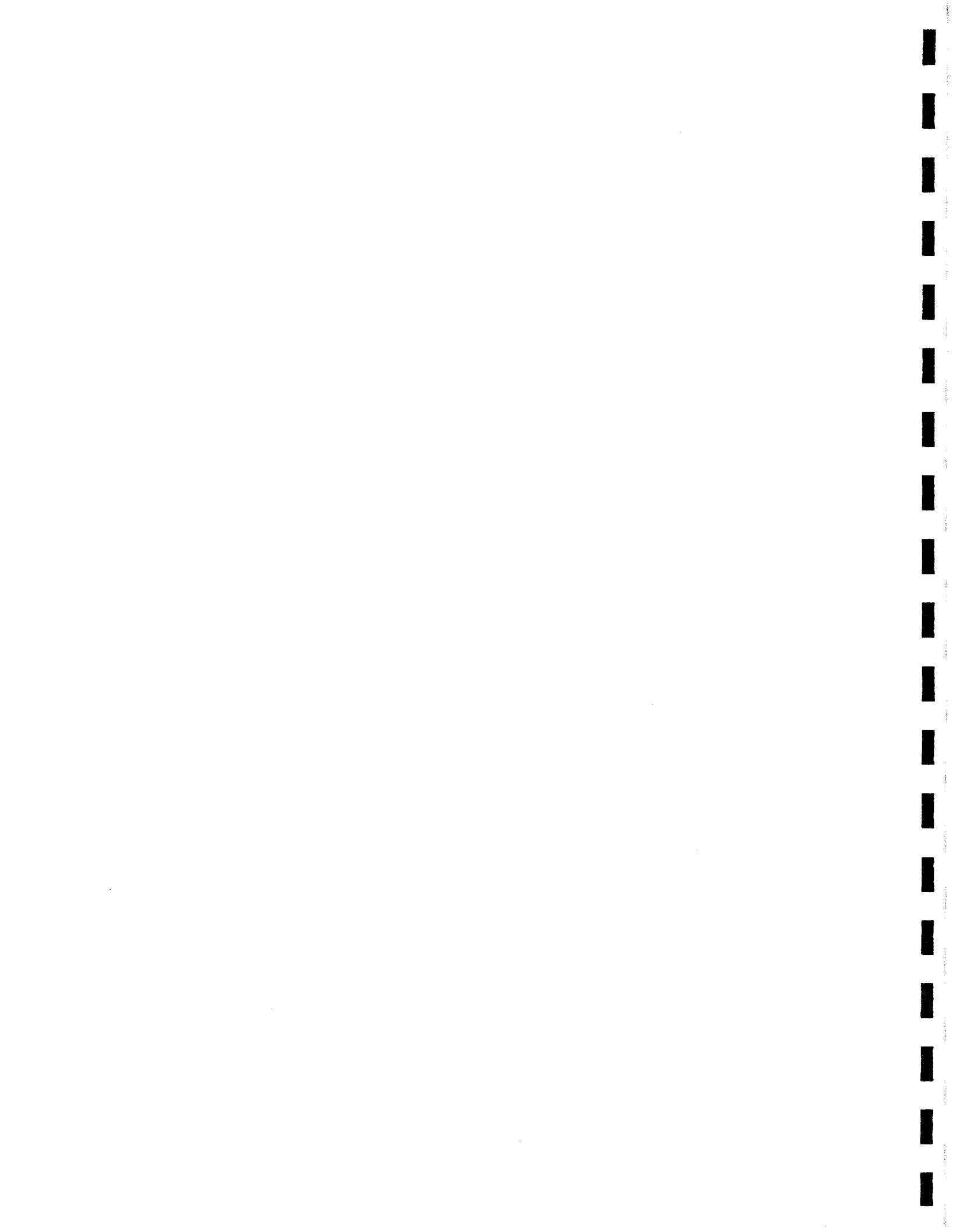
- 8.1. This Agreement is subject to the following provisions.

8.1.1. Pursuant to subparagraph 3.4 of this Agreement, **OWNER** has assigned Charles H. Martin, P.E., Director of the Division of Water Quality (the "**OWNER'S** Agent"), as the authorized agent of **OWNER**, to monitor, direct and review the performance of work of the **CONSULTANT**. Documents, data, reports, and all matters associated with carrying out this Agreement shall be addressed to the **OWNER'S** Agent or his designee. Questions by the **CONSULTANT** regarding interpretations of the terms, provisions and requirements under this Agreement shall be addressed to the **OWNER'S** Agent or his designee. The **CONSULTANT** shall look only to the **OWNER'S** Agent or his designee for direction in its performance under this Agreement; no other direction shall be binding upon **OWNER**. **OWNER** shall respond to written requests by **CONSULTANT** within thirty (30) days.

- 8.2. This Agreement, together with the Incorporated Documents (Section 1.2) constitutes the entire Agreement between **OWNER** and **CONSULTANT** and supersedes all prior written or oral understandings. This Agreement and **EXHIBITS A, B, C and D** and any related schedules or documents may only be amended, supplemented, modified or canceled by a duly executed written instrument.

- 8.3. **NO THIRD PARTY RIGHTS.** This agreement does not create a contractual relationship with or right of action in favor of a third party against either **OWNER** or **CONSULTANT**.

- 8.4. **UNENFORCEABLE TERMS/SURVIVABILITY.** If any term or provision of this Agreement shall be found to be illegal or unenforceable, this Agreement shall remain in



full force and such term or provision shall be deemed stricken. The provisions of Section 6 of this Agreement shall survive its termination.

8.5. NON-WAIVER. The failure of either party to enforce any right reserved to it in this Agreement shall not be a waiver of any such right to which the party is entitled.



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

OWNER:

LEXINGTON-FAYETTE URBAN
COUNTY GOVERNMENT

BY: Jim Gray
JIM GRAY, MAYOR

CONSULTANT:

HAZEN AND SAWYER

BY: Gary J. Haubner
GARY J. HAUBNER
VICE PRESIDENT

ATTEST:

Michelle B. Deputy
URBAN COUNTY COUNCIL CLERK
~~COMMONWEALTH OF KENTUCKY~~)
STATE OF OHIO)
COUNTY OF FAYETTE HAMILTON)

The foregoing Agreement was subscribed, sworn to and acknowledged before me by Gary J. Haubner, as the duly authorized representative for and on behalf of Hazen and Sawyer, on this the 5th day of January, 2018.

My commission expires: October 20, 2020.

Lisa R. F. Ernst
NOTARY PUBLIC



LISA R F ERNST, Notary Public
In and for the State of Ohio
My Commission Expires Oct. 20, 2020



EXHIBIT A

**REQUEST FOR PROPOSALS/
SCOPE OF ENGINEERING SERVICES
AND RELATED MATTERS**

RFP#41-2017



**Investigation / Design Services for West Hickman WWTP
Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection**

Lexington – Fayette Urban County Government (LFUCG) Division of Water Quality

The Lexington-Fayette Urban County Government is accepting proposals from interested consulting engineering firms for the Investigation / Design Services for West Hickman WWTP Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection.

1. General Project Description

The CONSULTANT shall perform professional services as hereinafter stated which shall include but is not limited to customary civil, geotechnical, structural, mechanical, electrical engineering, and programming services as related to the Investigation / Design for West Hickman WWTP Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection.

After a rain event in May 2015 Clarifier #7 and #8 were found to have failed structurally due to assumed ground water pressure. To add to the history of problems with #8 this is the second time it has needed to be repaired. It was repaired in 2011. All reports, findings, and construction drawings will be provided. Currently, exploratory demolition has been performed on Clarifier #8. This has remained opened and will be available for each interested CONSULTANT to evaluate and take pictures.

West Hickman WWTP needs these two clarifiers repaired/rebuilt for continued use. The CONSULTANT will investigate the damage; present repair concepts; work with the owner to bid the project; and provide construction administration through the completion and start-up of the construction.

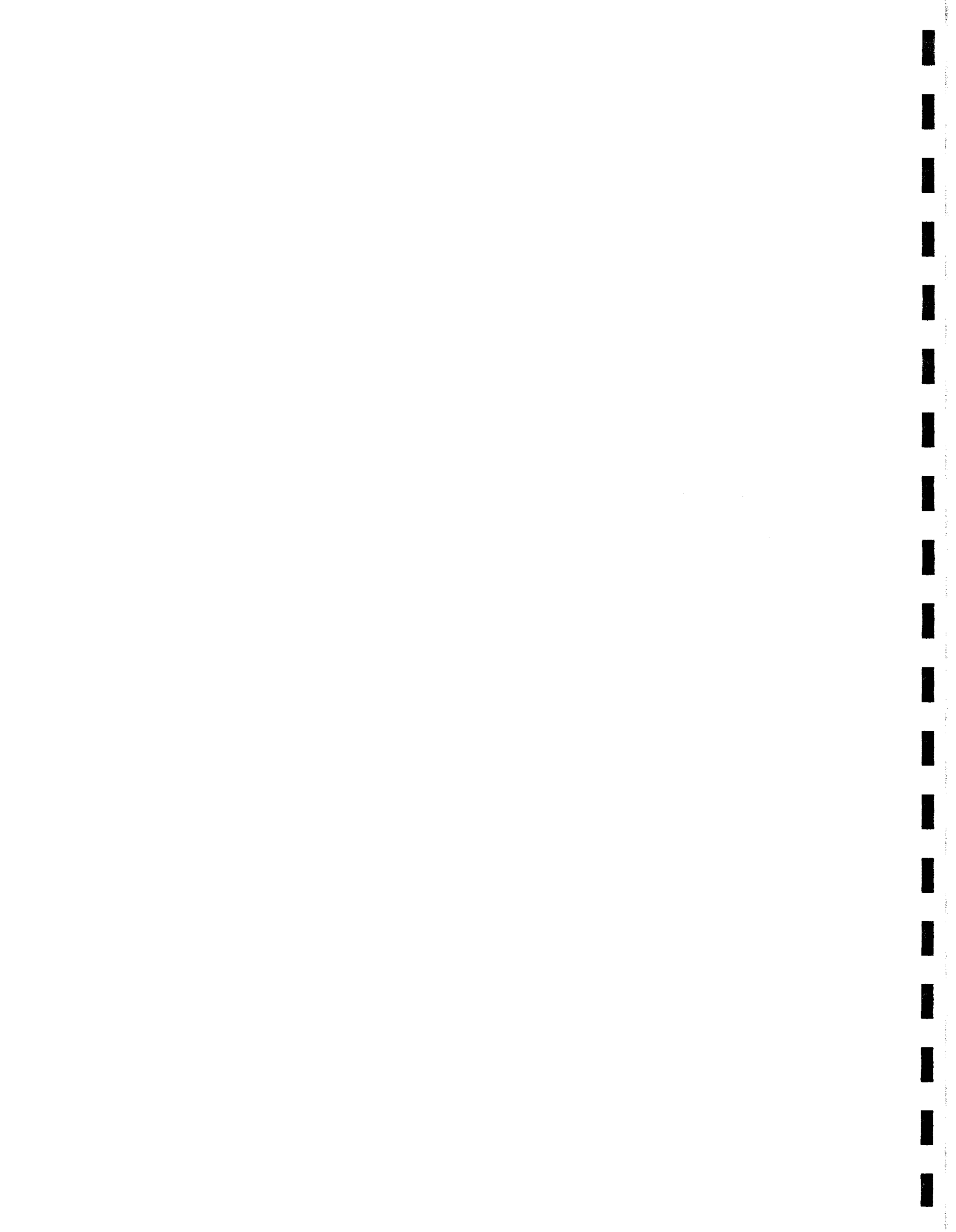
Funding for this project is 100% sewer fund revenue, no federal fund involvement is expected.

2. Scope of Work: Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection

Final Clarifiers #7 and #8 failed structurally due to assumed ground water pressure after flooding in 2015. The West Hickman Wastewater Treatment Plant needs these Final Clarifiers to be repaired for continued use. The CONSULTANT will need to investigate the damage; present repair concepts that allow the west Hickman Wastewater Treatment Plant Staff to operate the Final Clarifier passively.

A. Task 1: Collection of information – Evaluation of Damage

- (1) Review Final Clarifiers #7 and #8 original design from 2000.



- (2) Review damage and repairs for #8 in 2011.
- (3) Review damage and report for Final Clarifiers #7 and #8 from 2015.
- (4) Collect any other supporting data needed for design decisions.
- (5) To aide in the investigation phase there will be an allowance identified for exploratory demolition for each clarifier.

Please include in your proposal the following allowances:

Exploratory Demolition Clarifier #8 -	\$15,000.00
Exploratory Demolition Clarifier #7 -	\$40,000.00

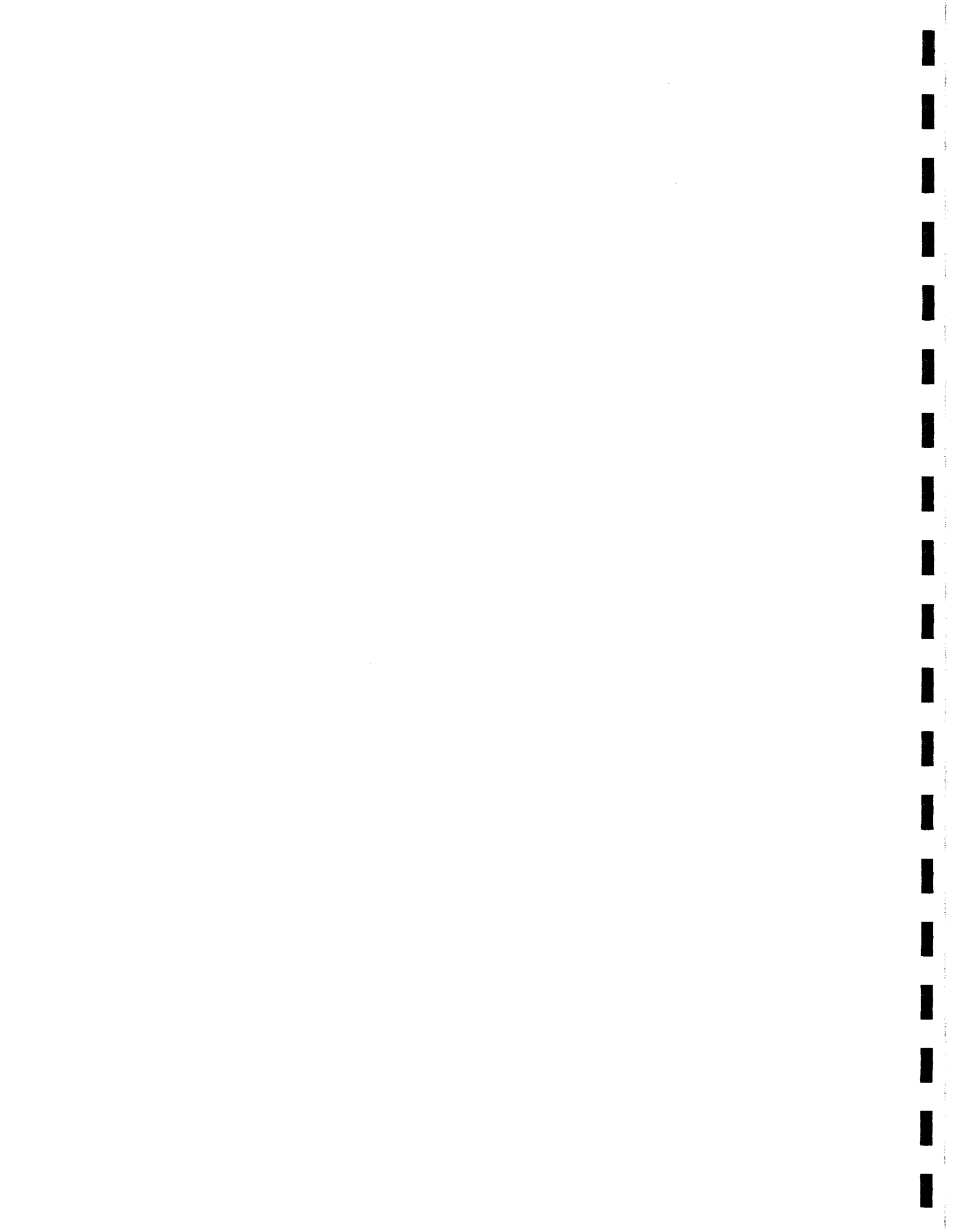
(The invoices for the work will be paid as a line item based on an hourly rate provided by the construction/demo contractor you hire for assistance. Invoices will be reviewed by LFUCG before payment. Remaining dollars from the allowances will be deducted through a change order.)

B. Task 2: Development of Repair Concepts, Schedule, Phasing and Costs

- (1) Prepare a conceptual layout for each concept evaluated along with design calculations.
- (2) Conduct a 20-year life cycle and present worth analysis for each conceptual design evaluated.
- (3) Prepare preliminary cost estimates and implementation schedules for all conceptual designs.
- (4) Present Preliminary Engineering Report to Treatment Plant Management Staff for a review of all conceptual designs and receive guidance for progress towards the final design.
- (5) LFUCG will respond in writing to the preliminary Engineering Report, providing authorization for work under Task 3.

C. Task 3: Detailed Design

- (1) Conduct detailed design progress meetings at 25%, 50%, and 90% completion. The dates for these progress meetings will be decided on during the first pre-design meeting. Progress reports and drawings will be submitted one week before the Lexington-Fayette Urban County Government review and comment. (3 copies)
- (2) Conduct and present any related design calculations to support the new equipment/process.



- (3) Furnish detailed cost estimates for probable cost and revise the 20-year life cycle and present worth analysis for the 50% review and the final design.
- (4) Update project schedules at 25%, 50% and 90%.

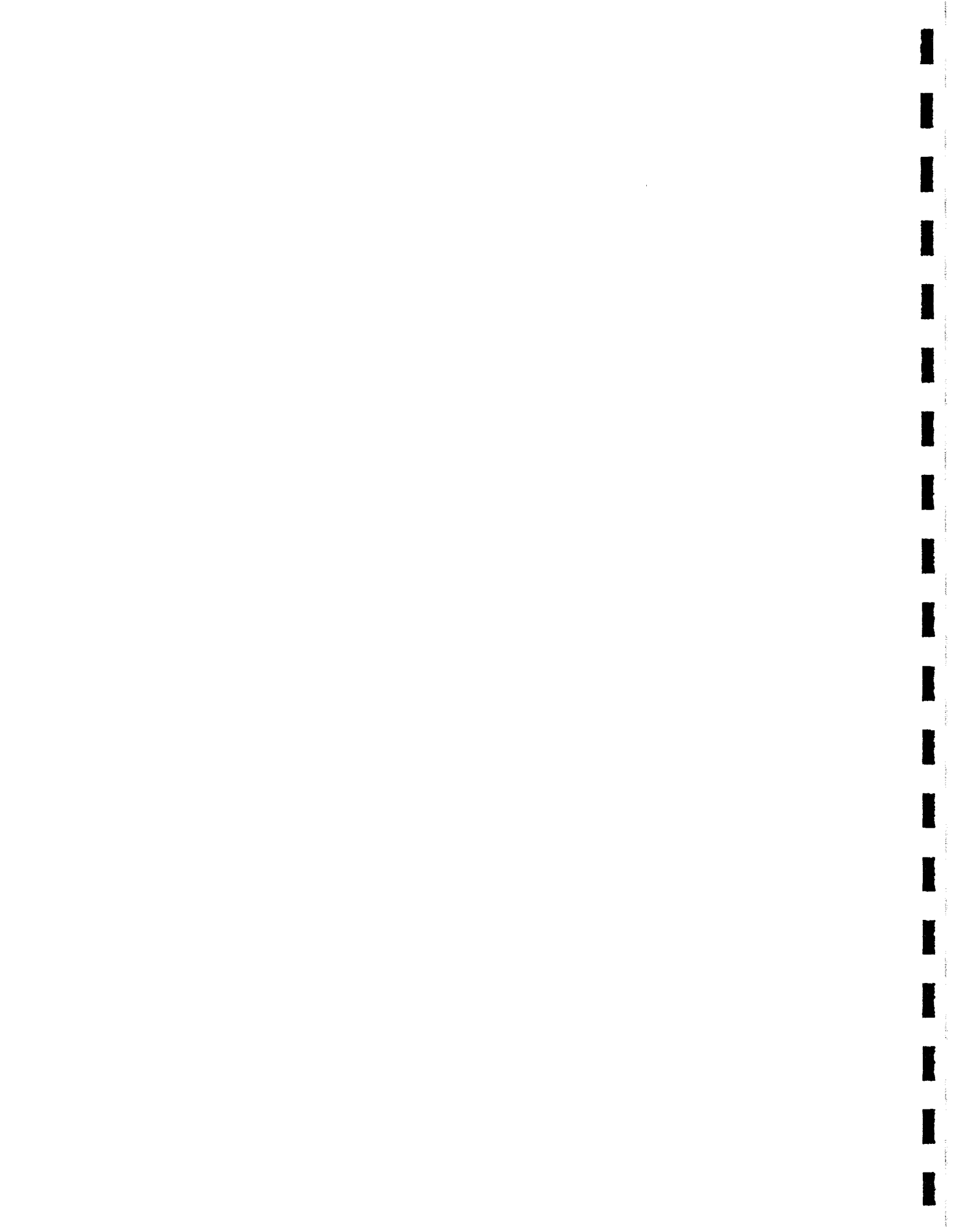
D. Task 4: Bidding Services

- (1) Prepare final plans and specifications ready for bidding. Plans and specifications are to be provided in both hard copy and standard electronic format compatible with Lexington-Fayette Urban County Government equipment. The most recent plans and specifications have been submitted in PDF format. A minimum of 7 copies will be required.
- (2) Coordinate and submit plans, specifications, and permit application to the Kentucky Division of Water for the purposes of receiving a construction permit.
- (3) Provide customary bidding services including preparation of advertisement, conducting pre-bid meeting, issuing required addenda, evaluating bids and providing a recommendation of award.

E. Task 5: Construction Administration Services

- (1) Track, review and approve all shop drawings.
- (2) Track change orders, review requests, recommendation comments, and prepare the paper work to be submitted to council.
- (3) Track and answer all Request for Information (RFIs)
- (4) Coordinate and lead monthly construction progress meetings.
- (5) Conduct construction inspections and submit weekly reports once construction begins. Please submit estimated hours per week, total hours included for inspections and the hourly rate with your detailed cost estimate
- (6) Take before and after photos of all stages of construction.
- (7) Review and approve contractor's monthly payment applications.
- (8) Attend and maintain test reports for all equipment start-up for the project.
- (9) Coordinate final inspection of completed work and prepare the final punch list.
- (10) Transfer field notes from the contractor's drawings and submit final as-built drawings to the owner.

NOTE: This outline is not intended to be all inclusive but is intended to be a guide for prospective firms as to the general expectations of the Owner. The Lexington-Fayette Urban County Government will not compensate firms for the cost of proposal preparation.



3. Detailed Cost Estimates

The CONSULTANT shall prepare a detailed cost estimate for this proposal based on the Tasks defined in this Request for Proposal. The estimate shall show a preliminary schedule estimating the time necessary to complete the Tasks outlined with a unit price associated. The intent of this proposal is to show the number of hours associated with a lump sum fee for the base bid. If your firm has additional Tasks that would be recommended show the new Tasks as separate line items with the scope well defined.

4. Proposal Content

The proposal will contain the following components.

- A. Cover Letter
- B. Scope/fee (Detailed Cost Estimate) – No more than 8 pages. ***The attached Fee Schedule completed with your estimated cost will be the last page in this section.***
- C. Estimated Schedule – No more than 4 pages.
- D. Project Team with One-Page Resumes (Do not submit resumes for individuals contributing less than 10% of total man hours allocated)
- E. A list of 5 similar projects with owner contact information. This section shall be no more than 5 pages total.

5. Schedule and Completion

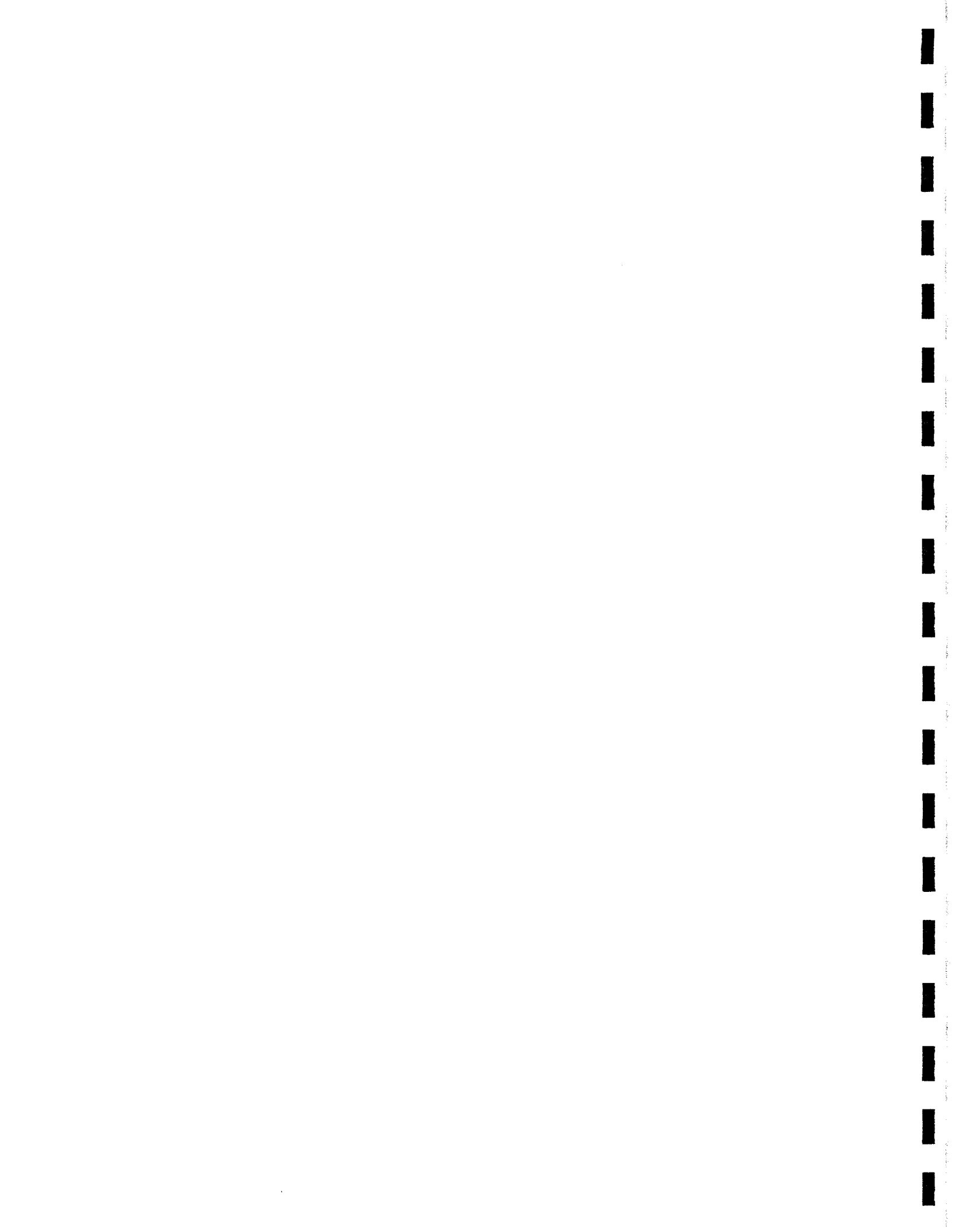
The proposed timeline for completion of the Scope of Services outlined in the proposal is as follows:

Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection

Award Design Contract	December 2017
Meeting to Review Final Design – 90% Completion	April 2017
Bid Opening	May 2017
Award of GC Contract	June 2017

The CONSULTANT shall coordinate the exact time and location of all meetings with the Plant Engineer, Division of Water Quality.

NOTE: Schedule may be adjusted based on final negotiations. When submitting the schedule with your proposal, please indicate if your firm could complete this project any sooner than the estimated time above.



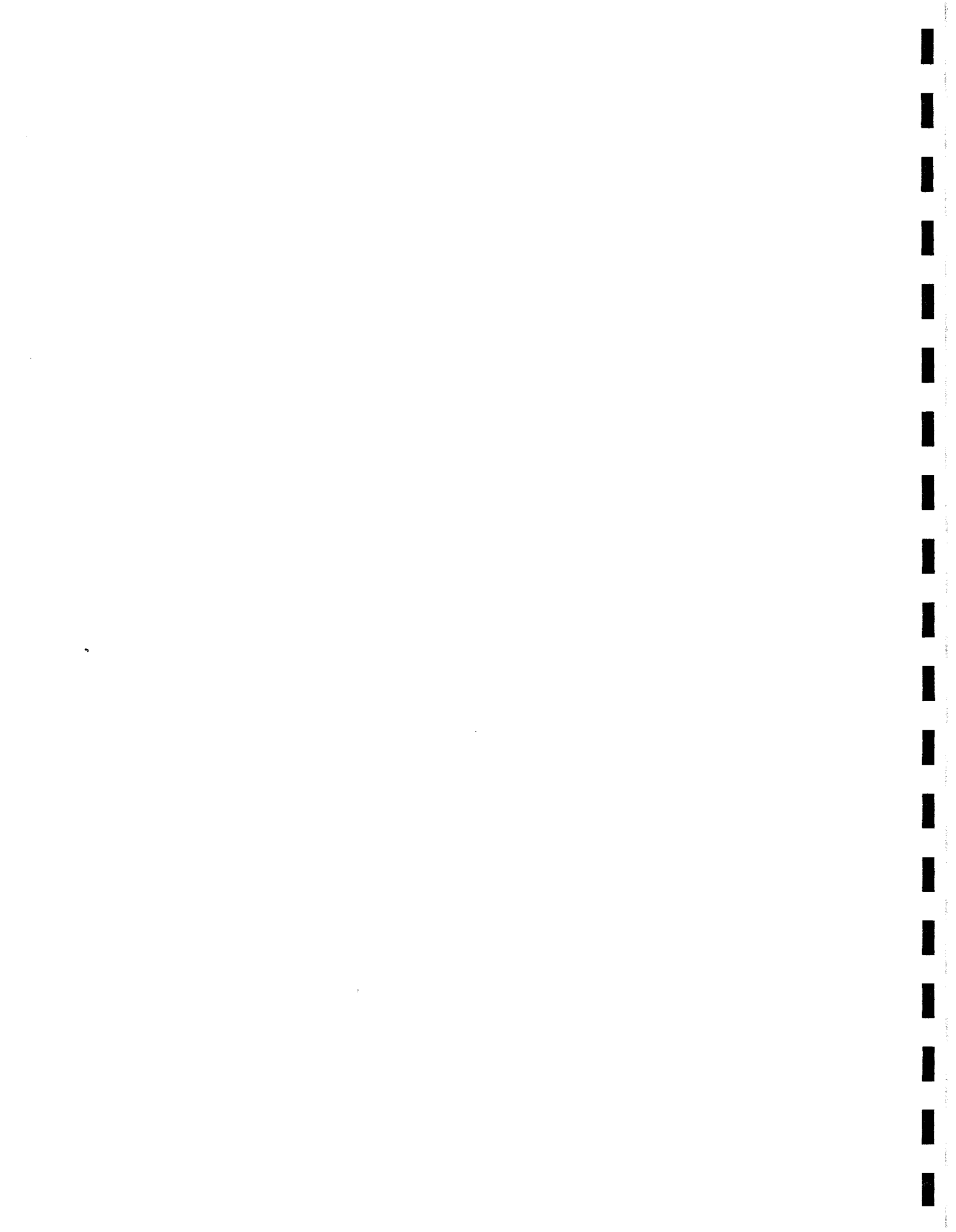
6. Method of Invoice and Payment

The CONSULTANT shall submit monthly for basic services or work rendered, based upon the CONSULTANT'S estimate of the portion of the total services actually completed during the billing cycle. Each invoice shall be accompanied by a breakdown of hours attributed to each task for both the billing cycle and the cumulative project period. Also include the percent Disadvantaged Business Enterprise (DBE) cost with each monthly invoice.

The Director of Water Quality or his designee shall respond to the invoice within thirty days of receipt, either denying or approving payment. Specific project time sheets and other payroll information may be subject to reviews and audits by the Lexington-Fayette Urban County Government.

7. Miscellaneous

All plans, specifications and accompanying documents are subject to review by the Lexington-Fayette Urban County Government's Division of Water Quality, Division of Engineering, Division of Risk Management and Division of Building Inspection. The CONSULTANT shall be responsible for incorporating the comments and requirements of the divisions into all documents.



**Investigation/Design Services for West Hickman WWTP
Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection**

Fee Schedule

(For a description of each task refer to Section 2 of the RFP)

Section 2

Scope of Work: Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection

A. Task 1: Collection of Information: Evaluation of Damage

Cost Task 1: _____

Exploratory Demolition Clarifier #8

\$15,000.00

Exploratory Demolition Clarifier #7

\$40,000.00

B. Task 2: Development of repair Concepts, Schedule, Phasing and Cost

Cost Task 2: _____

C. Task 3: Detailed Design

Cost Task 3: _____

D. Task 4: Bidding Services

Cost Task 4: _____

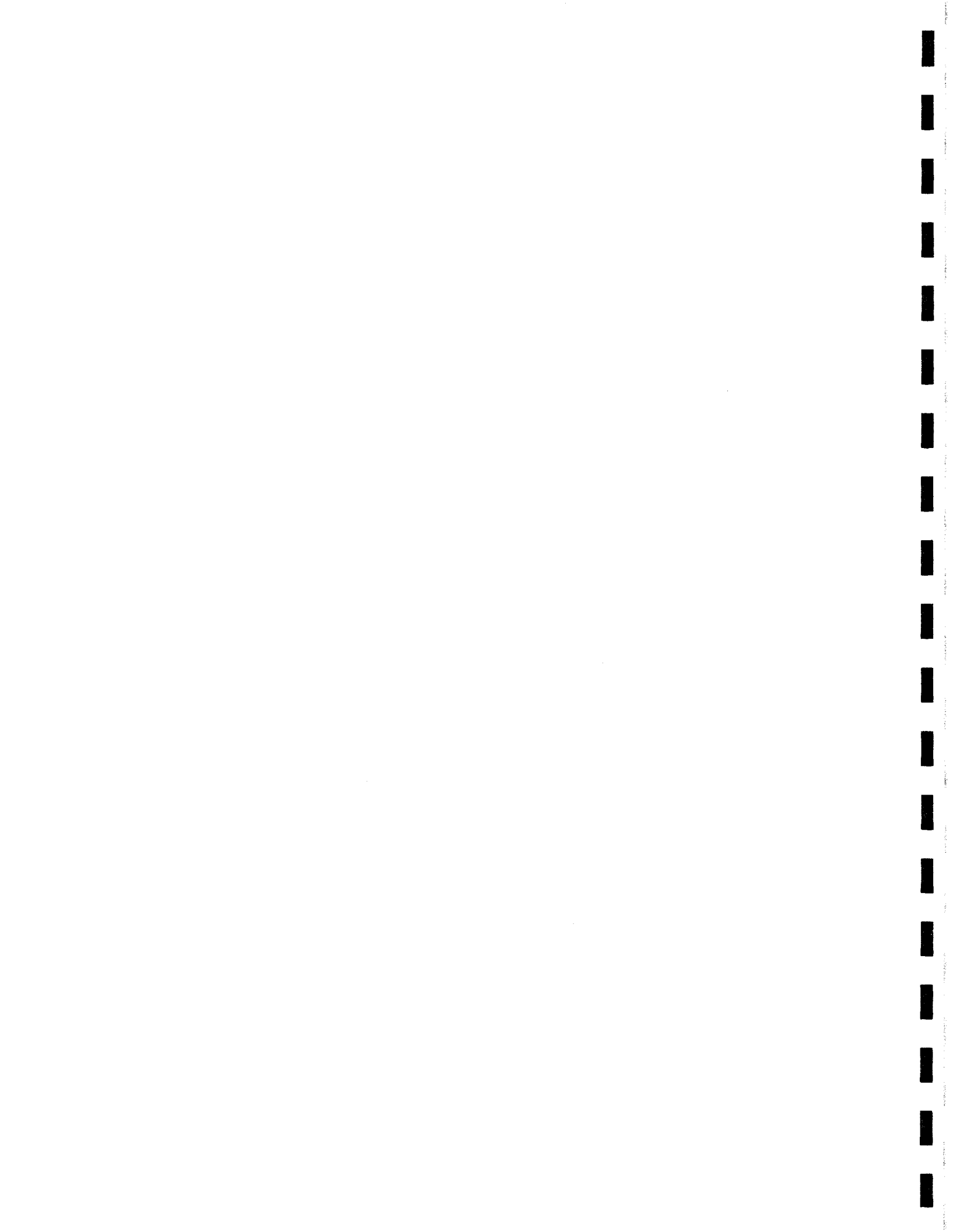
E. Task 5: Construction Administration Services

Cost Task 5: _____

Details for Task 5.5 - The total cost should be included in Cost Task 5. Please provide the following breakdown. Estimated Weekly Inspection Hrs/Estimated Total Inspection Hrs/Hourly Rate.

_____/_____

Section 2 Total Cost:



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #1

RFP Number: #41-2017

Date: October 3, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced RFP:

The Engineering Services Agreement for this project is attached.

A handwritten signature in black ink that reads "Todd Slatin".

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____



ENGINEERING SERVICES AGREEMENT

THIS IS AN AGREEMENT made as of _____, 2014, between the LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT (**OWNER**) and _____(name & address) _____(**CONSULTANT**). **OWNER** intends to proceed with the _____ as described in the attached Exhibit A, "**RFP #XX-2017 NAME OF RFP.**" The services are to include customary civil, sanitary, geotechnical, mechanical, structural, and electrical engineering services as related to completion and submission of reports and deliverables as described in Exhibit A, detailing the findings of all field inspections, inventory and required analysis completed by the **CONSULTANT**. The services are hereinafter referred to as the **PROJECT**.

OWNER and **CONSULTANT** in consideration of their mutual covenants herein agree in respect of the performance of professional engineering services by **CONSULTANT** and the payment for those services by **OWNER** as set forth below.

CONSULTANT shall provide professional consulting 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 consultation and advice to **OWNER** during the performance of services hereunder.

SECTION 1 - BASIC SERVICES OF CONSULTANT

1.1. General

CONSULTANT shall perform professional services as hereinafter stated that include customary civil, geotechnical, structural, mechanical, electrical and sanitary engineering services incidental thereto.

1.2. Project Phase

After written authorization to proceed, **CONSULTANT** shall:

- 1.2.1.** Notify the **OWNER** in writing of its authorized representative who shall act as Project Engineer and liaison representative between the **CONSULTANT** and the **OWNER**.
- 1.2.2.** The **CONSULTANT** must perform all duties necessary to fully complete the deliverables described in attached Exhibit A "**NAME OF RFP; RFP #XX-2017**" (including Appendices ___ and Addendums _____), and attached Exhibit C the "**Proposal of Engineering Services and Related Matters**" (the **CONSULTANT'S** response to RFP # _____), and amendments to the **CONSULTANT'S** proposal included in attached Exhibit D "**Further Description of Basic Engineering Services and Related Matters.**"

To the extent of any conflict among the provisions of these documents and/or this Agreement, the provisions of this Agreement shall control, followed by the provisions of **EXHIBIT A**, then **EXHIBIT D**, and then **EXHIBIT C**.

- 1.2.3 The **CONSULTANT** shall provide written documentation of all meetings and be responsible for incorporating all comments and changes resulting therefrom in final work product.
- 1.2.4. The **CONSULTANT** shall post all initial draft work products on the project document management portal. If the project document management portal is not functional on the draft posting date, the **CONSULTANT** shall submit five (5) copies (hardcover) of all initial draft final work products for this **PROJECT**. The copies of the initial draft final reports are submitted for review and comment by the **OWNER**, and should be presented in person to the **OWNER**.
- 1.2.5. After the **OWNER'S** detailed review, the **CONSULTANT** will revise the initial draft final for all work products for this **PROJECT**, and the **CONSULTANT** shall post all draft final work products on the project document management portal. If the project document management portal is not functional on the draft posting date, the **CONSULTANT** shall five (5) copies (hardcover). One electronic copy of the all work products for this **PROJECT**, including all appendices, shall be provided and prepared in such a manner that it can readily be converted to a quick-link accessible form for the **OWNER'S** Website. The **OWNER** shall have ten (10) business days within which to accept or deny each such final draft. If is denied, the **OWNER** shall provide a detailed explanation in writing for the basis of such denial. Once the **OWNER** accepts the draft as final, a total of ten (10) final copies (hardcover) are required in addition to an electronic copy.
- 1.2.6 Immediately notify **OWNER** of any delay in the delivery of a work product or deliverable, regardless of cause. Give written notice to **OWNER** within five (5) business days whenever **CONSULTANT** observes or otherwise becomes aware of any development that affects the scope or timing of **CONSULTANT'S** services, or any defect in the work of Contractor(s).

SECTION 2 - EXTRA WORK BY CONSULTANT

- 2.1. The **OWNER** may desire to have the **CONSULTANT** perform work or render services in connection with this **PROJECT** other than provided by the expressed intent of this Agreement. Such work shall be considered as "Extra Work", subject to a change order, supplemental to this Agreement, setting forth the character and scope thereof and the compensation therefore. Work under such change order shall not proceed until the **OWNER** gives written authorization. Should the **OWNER** find it desirable to have previously satisfactorily completed and accepted plans or parts thereof revised, the **CONSULTANT** shall make such revisions as directed, in writing, by the **OWNER**. This work shall be considered as "Extra Work" and shall be paid as such.

- 2.2. All "Extra Work" is subject to prior written authorization of **OWNER** and necessary appropriations made by the Urban County Council.

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, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations.
- 3.2. Assist **CONSULTANT** by placing at his disposal available information pertinent to the Project.
- 3.3. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by **CONSULTANT**, and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of **CONSULTANT**.
- 3.4. 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, interpret, and define **OWNER'S** policies and decisions with respect to materials, equipment, elements, and systems pertinent to **CONSULTANT'S** services.
- 3.5. Give written notice to **CONSULTANT** whenever **OWNER** observes or otherwise becomes aware of any development that affects the scope or timing of **CONSULTANT'S** services, or any defect in the work of Contractor(s).
- 3.6. Furnish or direct **CONSULTANT** to provide, necessary Extra Work as stipulated in Section Two (2) of this Agreement or other services as required.

SECTION 4 - PERIOD OF SERVICES

- 4.1. Time is of the essence in the performance of this Agreement. See attached Exhibit D "Further Description of Basic Engineering Services and Related Matters" for the project schedule.
- 4.2. The provisions of this Section Four (4) and the various rates of compensation for **CONSULTANT'S** services provided for elsewhere in this Agreement have been agreed to in anticipation of the orderly and continuous progress of the **PROJECT** through completion.
- 4.3. If a delay results from the acts of **OWNER** or another entity that is required to permit or approve the work or services, an extension of time for such delay will be considered by **OWNER**.
 - 4.3.1. If the above type of delay occurs and **CONSULTANT** wants an extension of time, it must, within ten (10) days from the date of the delay, apply in writing to **OWNER** for an extension of time for a reasonable period, which must be agreed upon by **OWNER**.

- 4.3.2. If the extension of time is approved by **OWNER**, the **PROJECT** schedule shall be revised to reflect the extension. Such extension of time to the completion date shall in no way be construed to operate as a waiver on the part of **OWNER** of any of its other rights in the Agreement.
- 4.3.3. If the above type of delay would prevent complete performance of the **PROJECT** within ninety (90) days of the time specified therein, **OWNER** shall have the option of cancelling the **PROJECT** or otherwise adjusting the scope of the services or work and any related fees.
- 4.3.4. If the parties cannot mutually agree to an extension of time or an adjustment, Section 6.5 under "DISPUTES" of this Agreement shall apply.

4.4. If delays result solely by reason of acts of the **CONSULTANT**, the **CONSULTANT** must immediately notify the **OWNER** in the event of such delay, and provide the **OWNER** a written action plan within five (5) business days on how it will reasonably attempt to resolve the delay. If the parties cannot mutually agree to an extension of time or an adjustment, Section 6.5 under "DISPUTES" of this Agreement shall apply. If the above type of delay would prevent complete performance of the **PROJECT** within ninety (90) days of the time specified therein, **OWNER** shall have the option of cancelling the **PROJECT** or otherwise adjusting the scope of the services or work and any related fees.

SECTION 5 - PAYMENTS TO CONSULTANT

5.1. Methods of Payment for Services of CONSULTANT.

5.1.1. For Basic Services

OWNER shall pay **CONSULTANT** a lump sum amount not to exceed _____.

5.2. Times of Payment

5.2.1. **CONSULTANT** shall submit monthly statements for Basic Services and Extra Work rendered. The Statements will be based upon **CONSULTANT'S** estimate of the proportion of the total services actually completed at the time of billing. **OWNER** shall respond to **CONSULTANT'S** monthly statements within thirty (30) days, either denying payment or making payment.

5.3. Other Provisions Concerning Payments

5.3.1. In the event the Agreement is terminated by the **OWNER** without fault on the part of the **CONSULTANT**, the **CONSULTANT** shall be paid for the work performed or services rendered for which it has not already been paid as determined by mutual agreement between the **OWNER** and the **CONSULTANT**.

- 5.3.2. In the event the services of the **CONSULTANT** are terminated by the **OWNER** for fault on the part of the **CONSULTANT**, the **CONSULTANT** shall be paid reasonable value of the work performed or services rendered and delivered for which it has not already been paid, and the amount to be paid shall be determined by the **OWNER**.

SECTION 6 - GENERAL CONSIDERATIONS

6.1. Termination

- 6.1.1. **CONSULTANT** may only terminate this Agreement due to **OWNER'S** material breach of the terms hereof which breach causes **CONSULTANT** to be unable to perform its duties and responsibilities under this Agreement and upon forty-five (45) days written advance notice to **OWNER**.
- 6.1.2. The **OWNER** may terminate this Agreement for cause upon seven (7) business days written advance notice to the **CONSULTANT**. The **OWNER** reserves the right to terminate the Agreement for any reason whatsoever, with or without cause, at any time upon thirty (30) days written advance notice to the **CONSULTANT**.

6.2. Ownership and Reuse of Documents

All documents, including raw data, reports, Drawings and Specifications, prepared by the **CONSULTANT** pursuant to this Agreement shall be delivered to and become the property of the **OWNER**. The **OWNER** shall have the right to reuse same without restriction or limitation, but without liability or legal exposure to **CONSULTANT**.

6.3. Legal Responsibilities and Legal Relations

- 6.3.1. The **CONSULTANT** shall familiarize himself with and shall at all times comply with all federal, state, and local laws, ordinances, and regulations that in any manner affect the services of this Agreement.
- 6.3.2. In performing the services hereunder, the **CONSULTANT** and its consultants, employees, agents and representatives shall not be deemed or construed to be employees of **OWNER** in any manner whatsoever. Except as otherwise provided in this Agreement, the **CONSULTANT** shall be acting as an independent contractor. The **CONSULTANT** shall not hold itself out as, nor claim to be, an officer or employee of **OWNER** by reason hereof and shall not make any claim, demand or application to or for any right or privilege applicable to an officer or employee of **OWNER**. The **CONSULTANT** shall be solely responsible for any claims for wages or compensation by **CONSULTANT'S** employees, agents and representatives, including consultants, and shall save and hold **OWNER** harmless therefrom.

6.3.3. The parties hereto agree that causes of actions between the parties shall be governed by applicable provisions of the Kentucky Revised Statutes, and that venue of any legal action shall be a court of appropriate jurisdiction in Fayette County, Kentucky. The parties further agree that Kentucky law shall apply with respect to the interpretation of any provision of this Agreement.

6.4. Successors and Assigns

6.4.1. **CONSULTANT** binds itself and his partners, successors, executors, administrators, assigns and legal representatives to this Agreement in respect to all covenants, agreements, and obligations of this Agreement. **CONSULTANT** shall not assign any interest, obligation or benefit in this Agreement. **CONSULTANT** shall not assign any interest, obligation or benefit in this Agreement nor transfer any interest in the same, whether by assignment or novation, without prior written consent of **OWNER**.

6.4.2. The **CONSULTANT** shall not subcontract more than fifty percent (50%) of the work, based upon dollar value of the work. The **CONSULTANT** shall obtain written approval prior to subletting or assigning any services contained in this Agreement, and consent to sublet or assign any part of this Agreement shall not be construed to relieve the **CONSULTANT** of any responsibility for compliance with the provisions of this Agreement.

6.4.3. Nothing herein shall be construed to give any rights or benefits hereunder to anyone other than **OWNER** and **CONSULTANT**.

6.5. Disputes

Except as otherwise provided in this Agreement, any dispute hereunder may be resolved by agreement of the **OWNER'S** Agent (Section 8.1.1) and the **CONSULTANT**. In the absence of such an agreement, the dispute shall be submitted to the **OWNER'S** Commissioner, Department of Environmental Quality & Public Works, whose decision shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, capricious, arbitrary, or so grossly erroneous as necessarily to imply bad faith. Pending a final decision of a dispute hereunder, the **CONSULTANT** shall proceed diligently with the performance of the Agreement in accordance with the directions of the **OWNER**.

6.6. Accuracy of **CONSULTANT'S** Work

The **CONSULTANT** shall be required to perform this Agreement in accordance with the degree of ordinary and reasonable skill and care usually exercised by professional engineers prevailing at the time, place and under similar conditions as the services hereunder are rendered.

The **CONSULTANT** shall be responsible for the accuracy of all work, even though raw data, reports, Drawings and Specifications have been accepted by the **OWNER**, and it shall make any

necessary revisions or corrections resulting from its errors and/or omissions for no additional compensation. By submission of reports, soils and subsurface information, quantities estimates, calculations and Drawings and Specifications to the **OWNER**, the **CONSULTANT** has made an incontrovertible representation that the information is accurate within the appropriate standard of skill and care.. Failure on the part of **CONSULTANT** to provide the expected level of accuracy may be grounds for the **OWNER** to terminate this Agreement.

6.7. Security Clause

The **CONSULTANT** certifies that he shall not at any time release or divulge any information concerning the services covered by this Agreement to any person or any public or private organization except the **OWNER** without prior approval of the **OWNER** unless required by law

6.8. Access to Records

The **CONSULTANT** and his sub-consultants shall maintain all books, documents, papers, and accounting records, and make such materials available at their respective offices at all reasonable times during the Agreement period and for three (3) years from the date of final payment under the Agreement for inspection by the **OWNER**, and copies thereof shall be furnished if requested. Failure to maintain such records for three (3) years after the date of final payment may be grounds for the **OWNER** to disqualify the **CONSULTANT** from consideration for future consultant engineering Agreements.

6.9. Risk Management Provisions, Insurance and Indemnification

6.9.1. DEFINITIONS

The **CONSULTANT** understands and agrees that the Risk Management Provisions of this Agreement define the responsibilities of the **CONSULTANT** to the **OWNER**.

As used in these Risk Management Provisions, the terms "**CONSULTANT**" and "**OWNER**" shall be defined as follows:

- a. **CONSULTANT** means the consultant and its employees, agents, servants, owners, principals, licensees, assigns and subcontractors of any tier.
- b. **OWNER** means the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, boards, assigns, volunteers, and successors in interest.

6.9.2. INDEMNIFICATION AND HOLD HARMLESS PROVISION

- a. It is understood and agreed by the parties that **CONSULTANT** hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of **CONSULTANT** or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "**CONSULTANT**") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.
- b. **CONSULTANT** shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "**OWNER**") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by **CONSULTANT**'s performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the **CONSULTANT**; and (b) not caused solely by the active negligence or willful misconduct of **OWNER**.
- c. Notwithstanding, the foregoing, with respect to any professional services performed by **CONSULTANT** hereunder (and to the fullest extent permitted by law), **CONSULTANT** shall indemnify, save, hold harmless and defend **OWNER** from and against any and all liability, damages and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees, for any damage due to death or injury to any person or injury to any property (including the loss of use resulting therefrom) to the extent arising out of, pertaining to or relating to the negligence, recklessness or willful misconduct of **CONSULTANT** in the performance of this agreement.
- d. In the event **OWNER** is alleged to be liable based upon the above, **CONSULTANT** shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by **OWNER**, which approval shall not be unreasonably withheld.

- e. These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.
- f. **OWNER** is a political subdivision of the Commonwealth of Kentucky. **CONSULTANT** acknowledges and agrees that **OWNER** is unable to provide indemnity or otherwise save, hold harmless, or defend the **CONSULTANT** in any manner.

6.9.3. FINANCIAL RESPONSIBILITY

The **CONSULTANT** understands and agrees that the **CONSULTANT** shall, prior to final acceptance of the **CONSULTANT'S** proposal and the commencement of any work; demonstrate the ability to assure compliance with the Indemnity Agreement and other provisions of this Agreement.

6.9.4. INSURANCE REQUIREMENTS

6.9.4.1. Required Insurance Coverage

CONSULTANT shall procure and maintain for the duration of this Agreement the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to **OWNER** in order to protect **OWNER** against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by **CONSULTANT**. The cost of such insurance shall be included in any proposal:

<u>Coverage</u>	<u>Limits</u>
General Liability (Insurance Services Office Form CG 00 01)	\$1 million per occurrence, \$2 million aggregate or \$2 million combined single limit
Commercial Automobile Liability (Insurance Services Office Form CA 0001)	combined single, \$1 million per occurrence
Professional Liability	\$1 million per occurrence, \$2 million aggregate
Worker's Compensation	Statutory
Employer's Liability	\$500,000.00

The policies above shall contain the following conditions:

- a. **OWNER** shall be named as an additional insured in the General Liability Policy and Commercial Automobile Liability Policy.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by **OWNER**.
- c. The General Liability Policy shall include Business Interruption coverage.
- d. The Contractor shall carry Builders Risk coverage at a level sufficient to cover the replacement cost of any equipment or machinery used at the work site, if applicable.
- e. The General Liability Policy shall include a Pollution Liability endorsement and/or Environmental Casualty coverage unless it is deemed not to apply by **OWNER**.
- f. The General Liability Policy shall have a Professional Liability endorsement (including Errors and Omissions), which shall include Business interruption coverage and this policy or endorsement shall include Environmental Casualty coverage for any services performed pursuant to the contract, and/or a separate Professional Liability Policy shall be obtained unless it is deemed not to apply by **OWNER**. (**OWNER** does not need to be named as additional insured).
- g. **OWNER** shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- h. The Professional Liability policy shall be maintained for a minimum of three years beyond the completion date of the project, to the extent commercially available. If not commercially available, **CONSULTANT** shall notify **OWNER** and obtain similar insurance that is commercially available and acceptable to **OWNER**.
- i. Said coverage shall be written by insurers acceptable to **OWNER** and shall be in a form acceptable to **OWNER**. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

6.9.4.2. Renewals

After insurance has been approved by **OWNER**, evidence of renewal of an expiring policy must be submitted to **OWNER**, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

6.9.4.3. Right to Review, Audit and Inspect

CONSULTANT understands and agrees that **OWNER** may review, audit and inspect any and all of **CONSULTANT'S** records and operations to insure compliance with these Insurance Requirements.

6.9.5. SAFETY AND LOSS CONTROL

CONSULTANT shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and **OWNER**.

6.9.6. DEFINITION OF DEFAULT

CONSULTANT understands and agrees that the failure to comply with any of these provisions shall constitute default under this Agreement. **CONSULTANT** also agrees that **OWNER** may elect as its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging **CONSULTANT** for any such insurance premiums purchased, or suspending or terminating this Agreement.

SECTION 7 - EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Agreement, the **CONSULTANT** agrees as follows:

7.1. The **CONSULTANT** will not discriminate against any employee or application for employment because of race, color, religion, national origin, sex, age, or handicap. The **CONSULTANT** will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, national origin, sex, age, or handicap. Such action shall include, but not be limited to the following: employment upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeships. The **CONSULTANT** agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

7.2.1. The **CONSULTANT** will, in all solicitations or advertisements for employees placed by or on behalf of the **CONSULTANT**, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex, age (between forty and seventy), or handicap.

SECTION 8 - SPECIAL PROVISIONS, EXHIBITS, AND SCHEDULES

- 8.1. This Agreement is subject to the following provisions.
 - 8.1.1. Pursuant to subparagraph 3.4 of this Agreement, **OWNER** has assigned Charles H. Martin, P.E., Director of the Division of Water Quality (the "**OWNER'S Agent**"), as the authorized agent of **OWNER**, to monitor, direct and review the performance of work of the **CONSULTANT**. Documents, data, reports, and all matters associated with carrying out this Agreement shall be addressed to the **OWNER'S Agent** or his designee. Questions by the **CONSULTANT** regarding interpretations of the terms, provisions and requirements under this Agreement shall be addressed to the **OWNER'S Agent** or his designee. The **CONSULTANT** shall look only to the **OWNER'S Agent** or his designee for direction in its performance under this Agreement; no other direction shall be binding upon **OWNER**. **OWNER** shall respond to written requests by **CONSULTANT** within thirty (30) days.
- 8.2. This Agreement, together with the Incorporated Documents (Section 1.2) constitutes the entire Agreement between **OWNER** and **CONSULTANT** and supersedes all prior written or oral understandings. This Agreement and **EXHIBITS A, B, C and D** and any related schedules or documents may only be amended, supplemented, modified or canceled by a duly executed written instrument.
- 8.3. **NO THIRD PARTY RIGHTS.** This agreement does not create a contractual relationship with or right of action in favor of a third party against either **OWNER** or **CONSULTANT**.
- 8.4. **UNENFORCEABLE TERMS/SURVIVABILITY.** If any term or provision of this Agreement shall be found to be illegal or unenforceable, this Agreement shall remain in full force and such term or provision shall be deemed stricken. The provisions of Section 6 of this Agreement shall survive its termination.
- 8.5. **NON-WAIVER.** The failure of either party to enforce any right reserved to it in this Agreement shall not be a waiver of any such right to which the party is entitled.

MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #2

RFP Number: #41-2017

Date: October 9, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following changes to the above referenced RFP:

Pre-proposal Change:

Pre-proposal meeting will be conducted on October 11, 2017, 10:00am located at 645 West Hickman Plant Road, Jessamine County. The site will be available for visits from 9:00am-4:00pm on 10/11/2017 and from 9:00am-4:00pm on 10/17/2017.

Documents, reports and pictures pertaining to the finals in need of repair will be available for review on site. Due to the rain people will not be able to access the bottom of the clarifiers until the inflow of groundwater stops.

A handwritten signature in black ink that reads "Todd Slatin".

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.



COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #3

RFP Number: #41-2017

Date: October 12, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following changes to the above referenced RFP:

See attached drawings and reports from the pre-bid meeting.

A handwritten signature in black ink that reads "Todd Slatin".

Todd Slatin, Director
Division of Central Purchasing

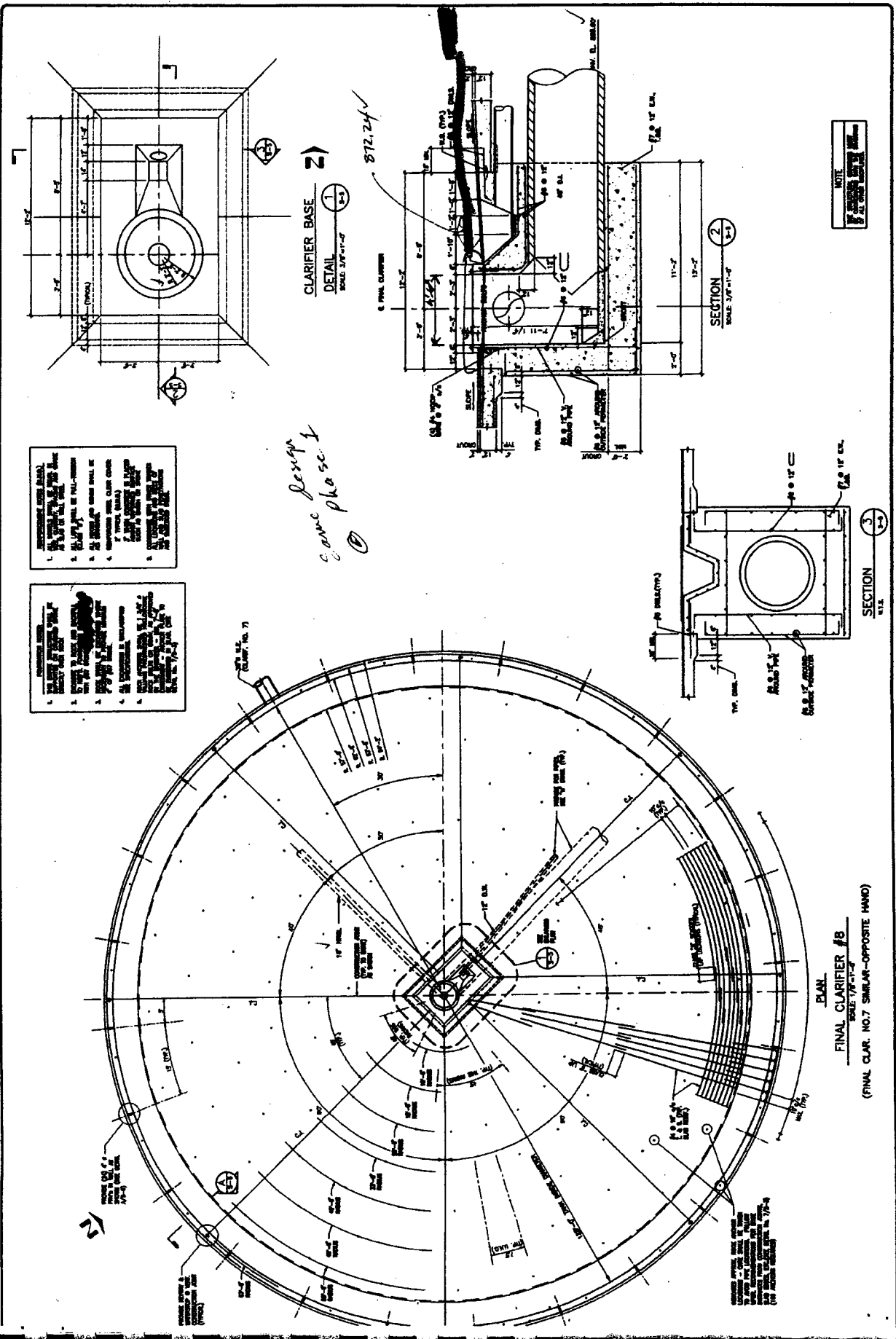
All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____





- REVISIONS:**
1. REVISIONS TO THE PLAN AND SECTION DRAWINGS.
 2. REVISIONS TO THE PLAN AND SECTION DRAWINGS.
 3. REVISIONS TO THE PLAN AND SECTION DRAWINGS.
 4. REVISIONS TO THE PLAN AND SECTION DRAWINGS.
 5. REVISIONS TO THE PLAN AND SECTION DRAWINGS.
 6. REVISIONS TO THE PLAN AND SECTION DRAWINGS.
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 8. REVISIONS TO THE PLAN AND SECTION DRAWINGS.
 9. REVISIONS TO THE PLAN AND SECTION DRAWINGS.
 10. REVISIONS TO THE PLAN AND SECTION DRAWINGS.

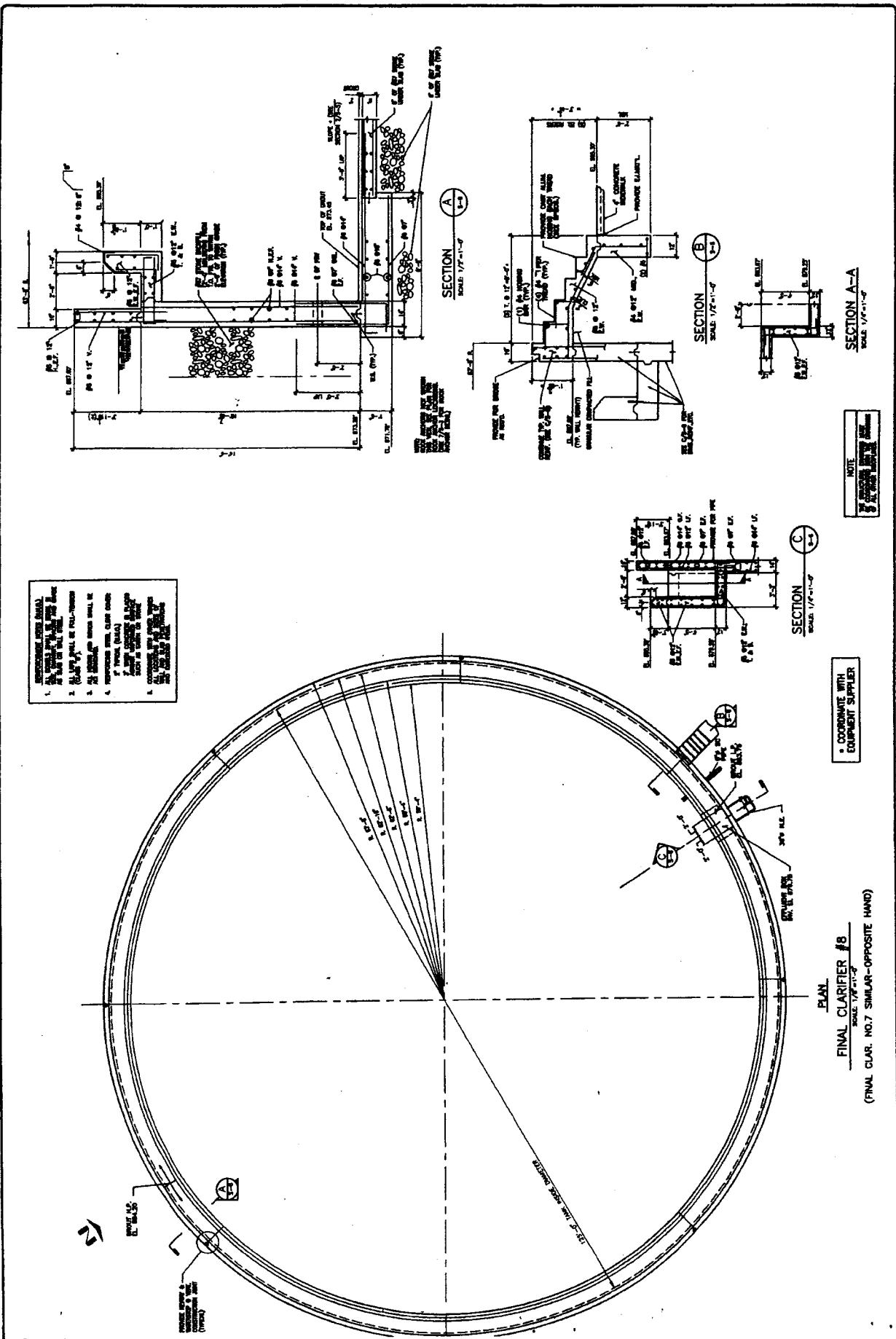
- NOTES:**
1. THE CLARIFIER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE A.S.T.M. AND A.C.I. SPECIFICATIONS.
 2. THE CLARIFIER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE A.S.T.M. AND A.C.I. SPECIFICATIONS.
 3. THE CLARIFIER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE A.S.T.M. AND A.C.I. SPECIFICATIONS.
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 10. THE CLARIFIER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE A.S.T.M. AND A.C.I. SPECIFICATIONS.

come design phase 1

PLAN
FINAL CLARIFIER #8
 SCALE: 1/8" = 1'-0"
 (FINAL CLAR. NO.7 SIMILAR-OPPOSITE HAND)

SCALE: AS NOTED
DATE: MAY 2003
DESIGNED BY: DLS
CHECKED BY: DLS
DATE: MAY 2003
FOR: WEST HICKMAN WWT

PROVISIONS



- UNDESIRABLE NOTES (N/A)**
1. ALL WALLS SHALL BE PERFORATED AT 1/2" DIA. SPACING.
 2. ALL WALLS SHALL BE PERFORATED AT 1/2" DIA. SPACING.
 3. ALL WALLS SHALL BE PERFORATED AT 1/2" DIA. SPACING.
 4. UNDESIRABLE NOTE, CLEAR COVER.
 5. UNDESIRABLE NOTE, CLEAR COVER.
 6. UNDESIRABLE NOTE, CLEAR COVER.
 7. UNDESIRABLE NOTE, CLEAR COVER.
 8. UNDESIRABLE NOTE, CLEAR COVER.
 9. UNDESIRABLE NOTE, CLEAR COVER.
 10. UNDESIRABLE NOTE, CLEAR COVER.

NOTE
 COORDINATE WITH EQUIPMENT SUPPLIER

COORDINATE WITH EQUIPMENT SUPPLIER

PLAN
FINAL CLARIFIER #8
 SCALE: 1/8" = 1'-0"
 (FINAL CLAR. NO. 7 SIMILAR-OPPOSITE HAND)

SECTION A
 SCALE: 1/2" = 1'-0"

SECTION B
 SCALE: 1/2" = 1'-0"

SECTION C
 SCALE: 1/2" = 1'-0"

Fuller
Mossberger
Scott &
May



ENGINEERS

1409
North Forbes Road
Lexington Kentucky
40511-2050

859-422-0000
859-422-0100 fax

www.fmsm.com

August 31, 2007

O.1.1.LX2007116R01

Ms. Tiffany Rank
Lexington-Fayette Urban County Government
301 Lisle Industrial Avenue
Lexington, Kentucky 40511

Re: Report of Geotechnical Exploration
West Hickman WWTP
Clarifier No. 8 Failure
Jessamine County, Kentucky

Dear Ms. Rank:

Fuller, Mossberger, Scott and May Engineers, Inc. (FMSM) is pleased to submit this report of geotechnical exploration regarding the Clarifier No. 8 failure at the West Hickman WWTP. Specific project dates were:

- September 23, 2006 - Clarifier No. 8 failed
- February 27, 2007 - FMSM attends scoping meeting
- April 12, 2007 - FMSM submits proposal for geotechnical exploration
- May 29-30, 2007 - FMSM performs geotechnical exploration
- June 6, 2007 - FMSM performs limited topographic survey of Clarifier No. 8
- August 3, 2007 - FMSM submits draft report
- August 31, 2007 - FMSM submits final geotechnical report

We have enjoyed working with you in support of this failure investigation. Please don't hesitate to call our office if you have any questions.

Sincerely,

FULLER, MOSSBARGER, SCOTT AND MAY
ENGINEERS, INC.

A handwritten signature in black ink, appearing to read 'Kurt J. Schaefer'.

Kurt J. Schaefer, PE
Associate

A handwritten signature in black ink, appearing to read 'Scott L. Murray'.

Scott L. Murray, PE
Vice President

/cmp

Report of Geotechnical
Exploration

West Hickman WWTP
Clarifier No. 8 Failure
Jessamine County, Kentucky

Prepared for:
Lexington-Fayette Urban County
Government
Lexington, Kentucky

August 31, 2007

**Report of Geotechnical Exploration
West Hickman WWTP
Clarifier No. 8 Failure
Jessamine County, Kentucky**

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- Appendix B Subsurface Logs

Report of Geotechnical Exploration
West Hickman WWTP
Clarifier No. 8 Failure
Jessamine County, Kentucky

1. General Project Description and Purpose of Exploration

The West Hickman Waste Water Treatment Plant is located in northern Jessamine County, adjacent to RT 1980. More specifically, the site is located approximately 1.5 miles west of the intersection of RT 1980 and RT 1974. As reported by the Division of Sanitary Sewers, Lexington-Fayette Urban County Government (LFUCG), Clarifier No. 8 failed and became non-operational during a significant flood event on September 23, 2006. It was reported that floodwaters nearly overtopped the clarifier which was out of service at the time. If the fluid within the tank was relatively low, and the floodwaters were near the top of the tank, then a significant differential head between the water surface inside the clarifier and the floodwater could have resulted. Subsequent to malfunctioning of the unit, visible misalignment of the boom arms led to the draining of the clarifier and the removal of the boom pedestal and assembly located in the center of the unit. Removal of concrete in the area of the clarifier base by LFUCG revealed there was relative movement between the vault box in which the pedestal was mounted and the surrounding clarifier bottom. It was noted by LFUCG personnel that significant subsurface water flow was present and traveling through the horizontal separation between the vault box of the clarifier base and the overlying clarifier floor slab.

The purpose of this geotechnical exploration was to assess subsurface conditions near the vault box to attempt to determine if subsurface conditions caused or contributed to malfunctioning of the unit; and to suggest possible remedial options for the unit, if a cause of the failure could be determined.

FMSM's scope of work did not include any evaluation of the structural design and details; nor any evaluations or reviews of construction activities and materials or construction monitoring reports.

2. General Site Geology

Available geologic mapping (Geologic Maps of the Coletown Quadrangle and the Nicholasville Quadrangle, Jessamine and Fayette Counties, Kentucky USGS) indicates the site is underlain by bedrock belonging to the Tanglewood Limestone Member, Brannon Member and the Grier Limestone Member of the Lexington Limestone Formation. The Tanglewood Member is described as consisting of limestone with minor shale. The limestone is light gray in color, medium to coarse grained, thin to thick bedded. The shale is medium gray in color, limy, thin bedded and mostly interlaminated with shaley limestone. The Brannon Member is described as consisting of interbedded limestone and shale. The limestone (about 50 percent of the unit) is medium to dark gray, and micrograined to medium grained. The shale is medium to dark gray in color, limy and thin bedded. The Grier Limestone Member is described as consisting of limestone and shale. The limestone about (80 percent of the unit) is blue gray, fine to coarse grained, and thin to thick bedded. The shale is medium gray in color, limy and occurs in thin irregular beds between thicker limestone.

Bedrock structure contours shown on the base of the Brannon Member indicate a local rock strata dip of approximately 130 feet per mile downwardly towards the northwest. The West Hickman Creek Fault Zone is mapped in the vicinity of the site, with a portion of the fault zone underlying the existing facility. The West Hickman Creek Fault Zone is not known to have been active in recent geologic time.

3. Scope of Work

Nine borings were drilled inside the clarifier during this exploration in the vicinity of the vault box. The borings consisted of six thin-walled concrete cores followed by hollow-stem augering to the auger refusal, one thin-walled concrete core followed by augering and rock coring, and two rock core borings. The locations of the borings are shown on the drawing in Appendix A. The positions of the borings were established on-site by FMSM personnel. Borings were performed using a truck-mounted CME 45B drill rig equipped with an eight-inch thin-walled core bit and 3/4-inch hollow-stem augers. Borings B-2, B-8 and B-9 were extended into bedrock using NQ2-sized rock coring equipment. Upon completion of drilling, the bore holes were backfilled with fast-setting cement grout. All field activities were performed under the supervision of a project geologist or geotechnical engineer. Conditions encountered were noted by FMSM's project geologist.

Subsequent to drilling, the surface elevations of all borings were established using differential leveling and referenced to a benchmark provided by the West Hickman WWTP personnel.

4. Results of Exploration

The boring layout is presented on the drawing in Appendix A. A summary of the borings is presented in Table 1. Typed boring logs of the holes drilled are presented in Appendix B.

Table 1. Summary of Borings

Boring ID	Surface Elevation (MSL)	Concrete Thickness (ft)		Void Thickness* (ft)	Auger Refusal		Bottom of Hole	
		Grout Leveling Coarse	Reinforced Slab Coarse		Depth (ft)	Elevation (ft MSL)	Depth (ft)	Elevation (ft MSL)
B-1	872.47	0.2	0.6	0.2	1.0	871.47	1.0	871.47
B-2	872.51	0.2	0.6	0.2	1.7	870.81	16.7	855.81
B-3	872.49	0.2	0.8	0.2	4.3	868.19	4.3	868.19
B-4	872.45	0.2	1.2	0.2	N/A**	N/A	5.5	866.95
B-5	872.51	0.2	0.8	0.3	2.0	870.51	2.0	870.51
B-6	872.41	0.2	1.2	0.2	9.9	862.51	9.9	862.51
B-7	872.49	0.2	0.8	0.2	2.0	870.49	2.0	870.49
B-8	871.50	0.0	2.0	0.0	N/A	N/A	18.6	852.90
B-9	871.60	0.0	2.3	0.0	N/A	N/A	19.0	852.60

* Void thickness was measured from the base of the concrete slab to the top of the crushed stone base after the completion of thin walled coring.

** The augers deflected during advancement and the boring was terminated at a depth of 5.5 feet due to the tools binding.

Borings B-1 through B-7 were performed on the clarifier floor slab. These borings encountered a 0.2-foot thick layer of leveling grout overlying 0.6-foot to 1.2-foot of reinforced concrete. Beneath the concrete in Borings B-2 through B-7 were voids measuring 0.2-foot to 0.3-foot in vertical height, followed by a layer of No. 57 gravel which measured from 0.5-foot to 8.3-foot in thickness. Boring B-1 encountered a concrete surface covering the 18 inch diameter NRSL pipe. Between the clarifier slab and the top of concrete cover a void measuring 0.2 feet was noted.

Rock core borings B-8 and B-9 were started at the invert of the vault box and advanced at least ten-feet below the top of rock. Particular attention was given to note the presence of voids between the base of the concrete vault box and the top of the bedrock surface. These borings did not encounter significant void space between the base of the concrete of the box and the top of bedrock. The contact between the concrete and bedrock was well defined in the rock core samples, however, the bond between the concrete and the bedrock surface was not intact.

Rock core samples obtained from Borings B-2, B-8 and B-9 indicated that the underlying bedrock consists primarily of limestone. The limestone is gray, medium crystalline grained, fossiliferous, hard with shale interbeds. The shale is dark gray, silty and medium hard except in the upper 2-foot of the rock core samples where the shale exhibited some degree of weathering. The weathered shale was dark gray to black, and showed signs of black organic staining. As presented in the boring logs, the length of rock core sample recovered compared to the measured length of rock cored was the same for every coring run except the uppermost run in Boring B-9. This indicates there were no voids encountered in the bedrock cored. The lack of recovery of 0.1 feet of bedrock in Boring B-9 can be explained as the washing away of soft shale in the upper portion of bedrock within the coring run by water which is circulated through the tools during the rock coring process. No sudden advancement, or "dropping" of the drill tools was noted during the drilling process, which would have been indicative of very soft zones or voids in the bedrock. Further visual review of the rock core, as presented in Figures 1 through 4, shows the bedding planes to be intact and the contacts between shale and limestone beds to be tight.

5. Surveying

Subsequent to the field exploration, FMSM was requested to perform limited surveying of Clarifier No. 8 to determine surface elevations at various points on and within the clarifier. These points were then compared to elevations listed on record drawings of the clarifier and information returned from the drilling program. The record drawings, provided to FMSM by the LFUCG are dated August 1, 2001 and were produced by PDR Engineers, Inc. of Lexington, Kentucky. The locations of the spot elevations obtained, and tables showing comparisons between the record drawing elevations and existing elevations are presented on the drawing in Appendix A.

Typically, eight groups of elevations were obtained along radial lines located roughly equidistant around the perimeter of the clarifier. Elevations were determined at the following locations along each line:

- the top of the outer wall,
- the top of the inner wall,
- the top of the grout at the base of the outer wall, and
- the top of the grout at a distance of 50 feet from the outer wall to the center of the clarifier.

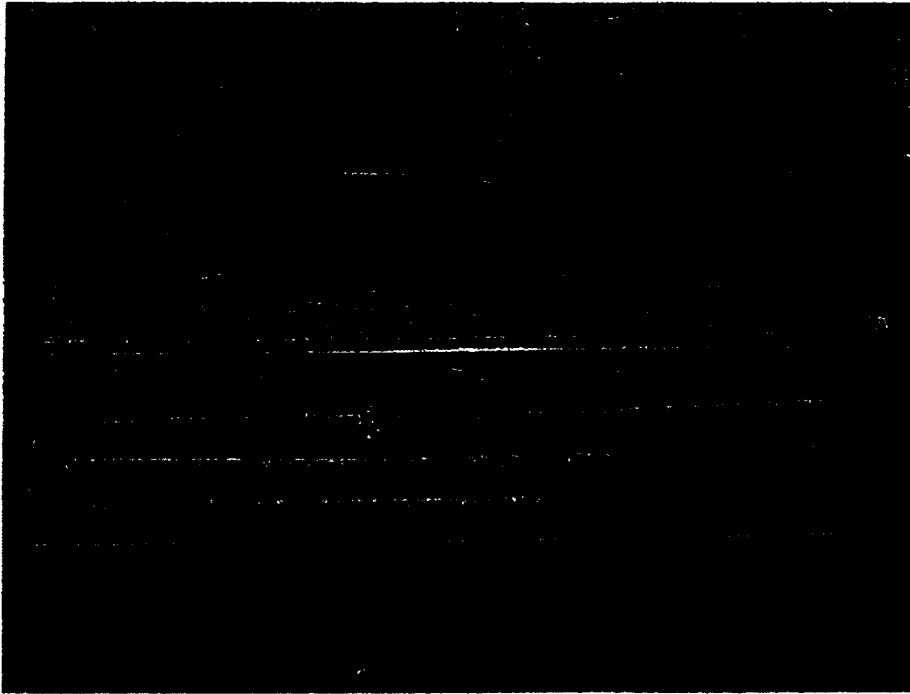


Figure 1. Boring B-2 Rock Core (Box 1 of 2)

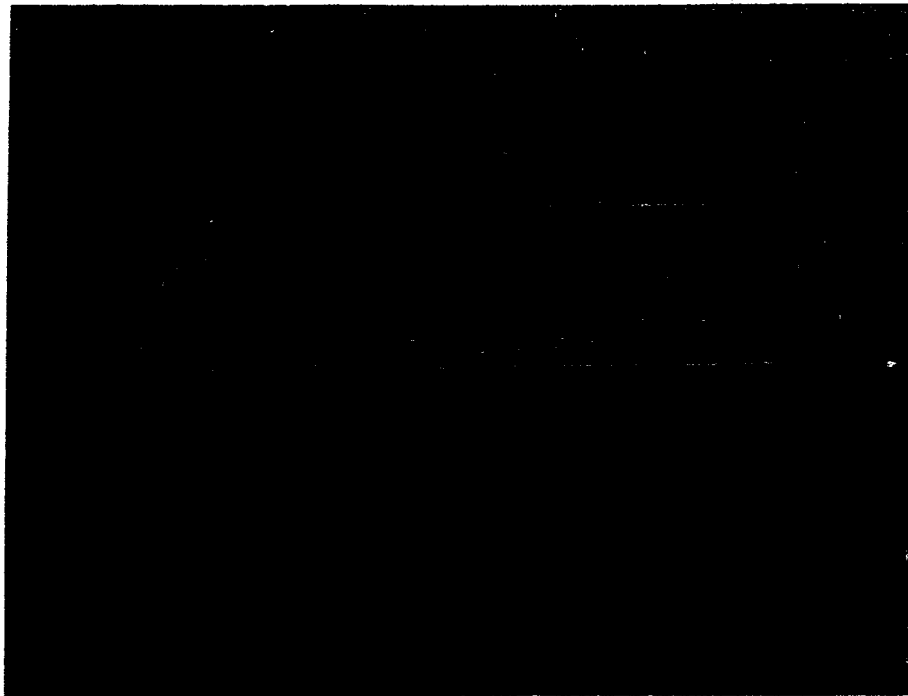


Figure 2. Boring B-2 Rock Core (Box 2 of 2)



Figure 3. Boring B-8 Rock Core (Box 1 of 1)

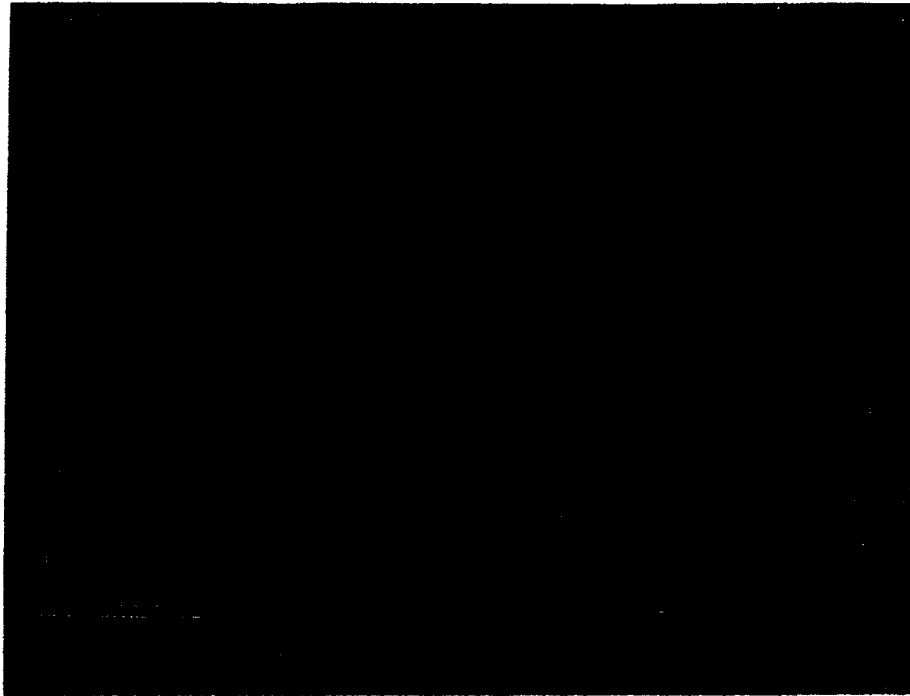


Figure 4. Boring B-9 Rock Core (Box 1 of 1)

In addition to the eight radial groups of elevations, eight additional points were obtained on the top of the grout at the base of the outer wall in the north and southwest quadrants of the clarifier to provide transition information along the wall base. Also, the invert elevations of the 48-inch diameter NRE pipe and the 12-inch diameter DW pipe were determined within the clarifier base to compare post-failure conditions to the record drawing elevations.

6. Conclusions

Based on reviews of construction and post-failure photographs, record drawings, and the recent drilling and survey data generated by FMSM, it is still not obvious what caused the malfunction of Clarifier No. 8. The possible causes of the malfunction discussed in the following paragraphs have not been confirmed at this time. Additional analyses, evaluations, and explorations will be required before the cause of the failure can be explained with the degree of confidence necessary to identify possible remedial options.

Based on conversations with LFUCG, reviews of photographs taken by LFUCG after the clarifier failed, and the field evaluation and exploration performed by FMSM it is interpreted that relative movement between the vault box and the clarifier floor slab caused a tilting and failure of the rack arms and draw off piping. A field visit by FMSM on February 27, 2007 revealed an open space of 0.15 feet between the floor slab and the vault box. Some relative movement between the vault box and the clarifier floor slab must have occurred to cause the gap.

6.1. Geotechnical Conclusions

6.1.1. Drilling through the floor slab in Borings B-1 through B-7 revealed a void beneath the slab and above the crushed stone base. The void varied from 0.2 to 0.3 feet in vertical height. Possible causes of the void could be:

- a. Settlement of foundation materials beneath the tank.
- b. Settlement of the crushed stone leveling course as a result of particle reorientation,
- c. The removal of the crushed stone leveling course by flowing ground water, or
- d. Raising of the floor slab from uplift forces during the September 23, 2006 rainfall event.

6.1.2. Three borings were advanced into bedrock to provide an identification of bedrock consistency immediately beneath and adjacent to the clarifier vault. The bedrock recovered showed signs of weathering/water staining in the upper reaches, but otherwise did not display any significant voids or other karst activity. During the drilling process of the two rock core borings advanced through the bottom of the vault, the driller paid particular attention to any dropping of the tools or rapid advancement of tooling which could indicate very soft rock or the presence of voids/solution features. No dropping of the tools or voids were noted by the driller during the coring process. After both Borings B-8 and B-9 were completed, a hooked probe was used to search the borehole side walls for voids or features, and to determine if there was a void between the concrete vault bottom and the top of bedrock. No features were noted in the bedrock, but a small space or soft zone, approximately 0.02 feet in thickness was noted in each boring between the base of the concrete and the top of bedrock. The results of the rock core borings performed by FMSM indicate the bedrock to be competent limestone and shale, and did not indicate the presence of significant voids, soft zones, or karst features that could have caused the vault box to settle. Therefore, settlement of the bedrock foundation material beneath the tank does not appear to be the cause of the malfunction.

6.1.3. Settlement of the crushed stone after placement is not out of the ordinary, but can typically be rationalized as proportional to the thickness of the stone layer. i.e. a base thickness of three feet would tend to undergo more reorientation settlement than a layer with a thickness of one foot. The crushed stone base encountered in Borings B-2 through B-7 varied in thickness from 0.5 feet in Boring B-2 to 8.3 feet in Boring B-6, which could present the probability of no measurable settlement in Boring B-2 but significantly greater settlement in B-6. The voids noted beneath the slab in both borings were equal in measurement at 0.2 feet.

6.1.4. Movement of the crushed stone by subsurface water flow is possible, but it would generally be expected that areas would show varying thickness of voids as the flow was more or less concentrated near a source and moved more or less material. Again, the vertical dimensions of the voids appear relatively uniform, and are therefore unlikely caused by movement of the gravel by subsurface flow.

6.1.5. A fourth possible explanation for creation of the void space involves the raising of the clarifier slab and the creation of airspace above the crushed stone as a result of the slab being subjected to hydrostatic uplift forces during flooding. This explanation tends to support the presence of uniform void dimensions because it is independent of both concrete thickness and crushed stone thickness.

6.2. Surveying Conclusions

6.2.1. The results of using the spot survey elevations to determine relative movement from record drawing elevations are dependent upon the accuracy of the record drawings and upon the construction tolerances. Reviewing the elevations of the top of the outer wall show the elevations obtained on 06/07/07 vary from 0.03 feet lower to 0.01 feet higher, than those indicated by record drawings and therefore present reasonable correlation with the record drawings. The elevation of the top of the grout layer at the base of the wall was obtained at 16 locations and compared to the record drawing elevation of 873.45 feet. The spot elevations obtained on 06/07/07 varied from 0.07 feet lower to 0.19 feet higher than the record elevation. Because the record drawings and photographs taken during construction indicate the outer wall was built on the top of the floor slab, it is not apparent that the slab has moved up or down relative to the wall. Also, if the slab did move relative to the wall, cracks should have occurred at the interface and subsurface water would likely be conveyed through the cracks. No seepage was noted by FMSM personnel during the field exploration.

Eight points approximately 50 feet from the outer wall toward the clarifier center were also established and the elevations determined. These locations are identified as the "Inner Radius" on the drawing in Appendix A. In order to compare these elevations to the design elevations, the design slope of the floor slab was calculated and used in the conjunction with the record elevation of the grout at the base of the wall, elevation 873.45 feet. The resulting calculated record elevation at these points should be 872.74 feet. The elevations obtained on 06/07/07 were consistently 0.19 to 0.23 feet lower than the record drawing elevation. However, because this comparison is based upon calculated values and not on as-built recorded survey points this comparison is not considered to be very reliable.

6.2.2. In order to assist in determining if the clarifier vault base had moved up or down, the invert elevations of the 48-inch diameter NRE line and the 12-inch diameter DW line were determined and compared to the invert elevations of the record drawings. The invert of the 48-inch diameter pipe was surveyed as being 0.15 feet higher in elevation than the record drawing, and the invert of the 12-inch diameter line was 0.07 feet higher than the record drawings. These elevations are in general agreement and indicate that it is unlikely that the inverts of the pipes were at higher elevations prior to the clarifier failure unless construction tolerances allowed the pipe to be constructed at a higher elevation than designed and recorded.

6.3. Summary Conclusions

6.3.1. Because of the bedrock cored below the base of the vault is sound and does not display evidence of karst features or subsidence it is does not appear that bedrock failed beneath the vault and caused the clarifier to malfunction.

6.3.2. Because the pipe inverts within the clarifier base are near or slightly higher than the record drawing elevations, and because there were no voids encountered beneath the vault bottom it does not appear that the vault base moved downward and caused the clarifier to fail.

6.3.3. The void encountered between the base of the clarifier slab and the top of the crushed stone could have been caused by upward movement of the floor slab. Photographs taken on October 12, 2006 show significant horizontal cracks on the west and east sides of the vault underneath the ring of threaded bolts to which the clarifier mechanisms were anchored (see Figures 5 and 6). A significant inflow of subsurface water can be seen flowing through the crack on the west side of the vault. Another photograph taken of the clarifier pedestal is presented as Figure 7, and shows circumferential cracking of the floor slab in the vicinity of the clarifier vault box. If these cracks were caused by upward movement of the slab and ring, the lifting of the anchor ring would cause lifting of the rake arms. Because the flow of water in Figures 5 and 6 appears to be of larger quantity on the west side of the vault it can be reasoned the crack was taller there and that there was more relative movement between the floor slab and vault box to the west. This is a possible explanation for the rack arm being elevated off the floor to the west and resting on the floor to the east of the vault (see Figures 8 and 9).

7. Recommendations

7.1. The clarifier failure is possibly the result of uplift forces from subsurface water during the storm event of September 23, 2006. In order for the clarifier slab to move upward, the uplift anchors shown on the record drawings would possibly have to fail. Movement of the anchors could be a result of one or more of the following scenarios:

- Failure of the bond between the anchor and the concrete slab,
- Failure of anchor member itself,
- Failure of the bond between the anchor and the grout (if grouted), or
- Failure of the bond between the grout and surrounding bedrock (if grouted).

Evaluation of the anchor design was not part of FMSM's scope of services. It is recommended that the anchor design be evaluated in conjunction with the physical events and conditions occurring on September 23, 2006. It is also recommended that a minimum of three anchors near the vault pit be located and tested to confirm/determine the pull-out/uplift capacity of the anchors. Testing should also include careful excavation and inspection of bond surfaces. FMSM is available to assist the LFUCG in preparation of an anchor evaluation and testing program. It should be noted that evaluation of the anchors may indicate adequate design and uplift resistance, and as a result, the need to continue to search for the cause of the malfunction will be necessary.

7.2. The bedrock cored beneath the clarifier base vault is competent, and is a suitable bearing medium for the clarifier base. It is recommended that the base bear on bedrock and be structurally connected to the floor slab.



Figure 5. West side of base vault showing large crack and inflow of water.



Figure 6. East side of base vault showing crack

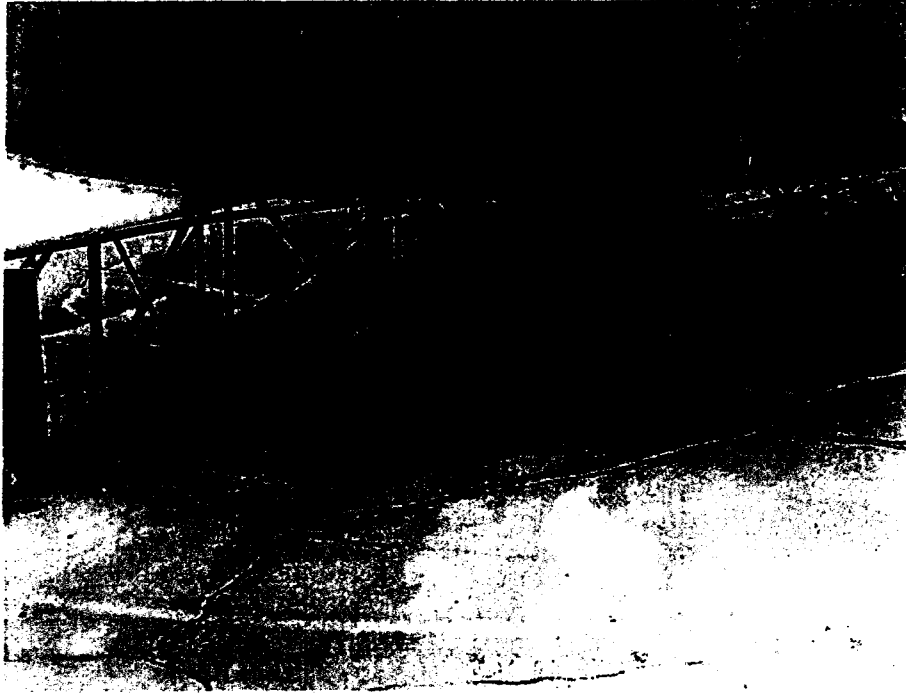


Figure 7. View of cracking around pedestal looking southeast.

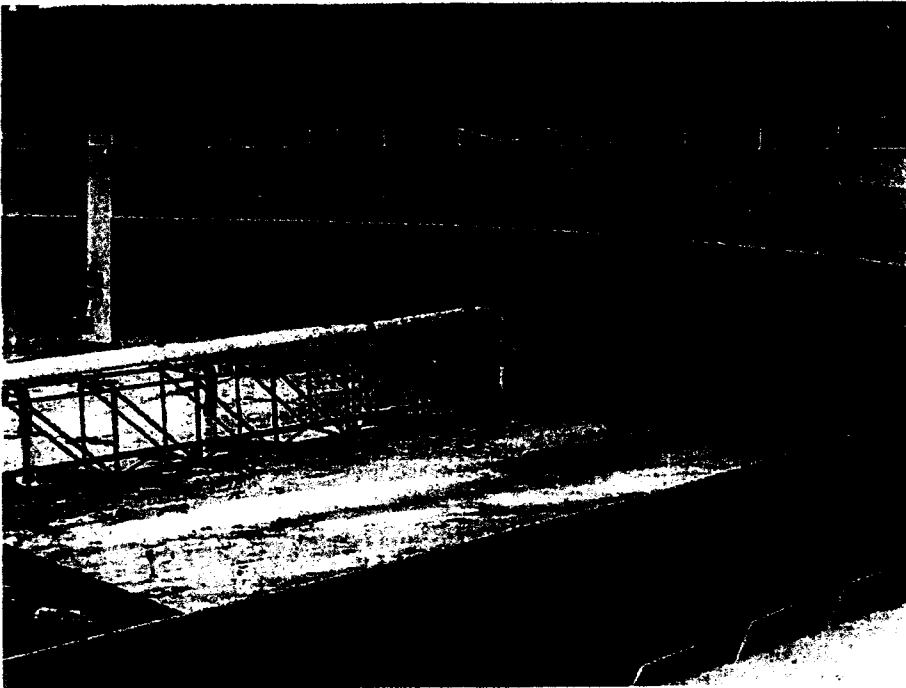


Figure 8. West rake arm elevated into the air after failure.

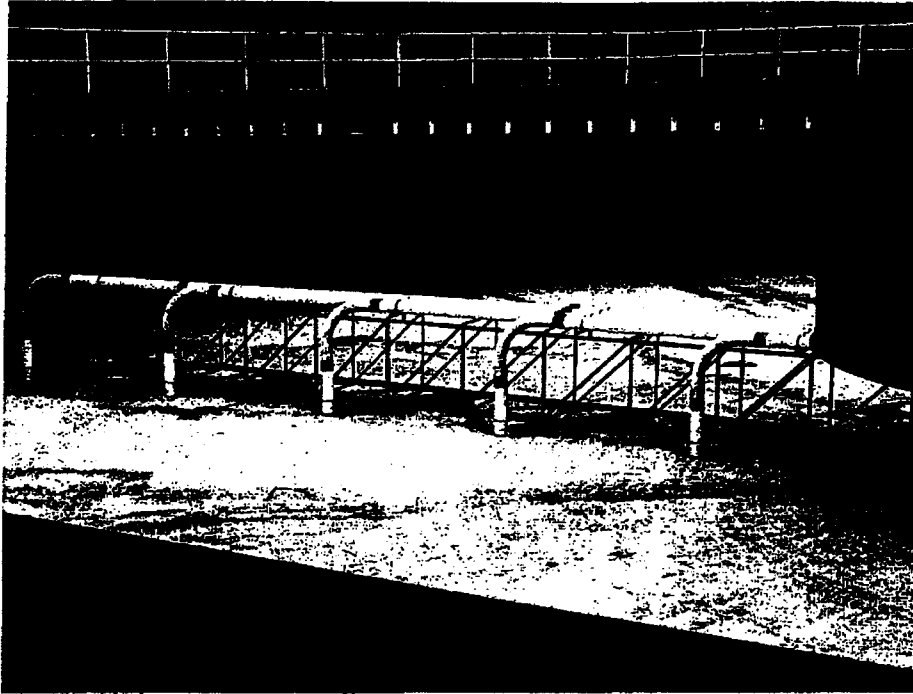


Figure 9. East rake arm resting on floor slab after failure.

7.3. It is recommended that additional thin walled core borings be advanced through the clarifier floor slab to better determine if the void encountered between the base of the concrete and the top of the gravel extends beneath the majority of the clarifier or if it is localized near the vault pit. At a minimum, a total of eight borings should be advanced. Two borings should be drilled on each of the four radial lines beginning at the center of the clarifier and extending to the north, south, east and west: with one boring drilled at a distance of 25 feet from the clarifier center, and the other boring drilled a distance of 50 feet from the center.

7.4. Specific recommendations regarding a remedial design cannot be offered until the cause of the clarifier, failure is determined.

7.5. The conclusions and recommendations presented herein are based on information gathered from the borings advanced during this exploration using that degree of care and skill ordinarily exercised under similar circumstances by competent members of the engineering profession. No warranties can be made regarding the continuity of conditions between borings.

Appendix A

Drawings

Appendix B

Subsurface Logs



SUBSURFACE LOG

Project Number	LX2007116	Location	Jessamine County	
Project Name	West Hickman WTP Clarifier Failure	Boring No.	B-1	Total Depth 1.0 ft
County	Jessamine County, Kentucky	Surface Elevation	872.47 ft	
Project Type	Geotechnical Exploration	Date Started	5/29/07	Completed 5/29/07
Supervisor	Dan Brown	Driller	Tim Caudill	Depth to Water N/A
Logged By	Dan Brown	Date/Time	N/A	
		Depth to Water	N/A	Date/Time N/A

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois. Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
872.5	0.0	Top of Hole							
872.3	0.2	Grout							Thin Wall Core 8"
871.7	0.8	Concrete							
871.5	1.0	Void							Sample not saved
		Auger Refusal / Bottom of Hole							

K.S.V. (HAEV) LEONINE CP, TMSA 007 0200



SUBSURFACE LOG

Project Number	LX2007116	Location	Jessamine County	
Project Name	West Hickman WTP Clarifier Failure	Boring No.	B-2	Total Depth 15.7 ft
County	Jessamine County, Kentucky	Surface Elevation	872.51 ft	
Project Type	Geotechnical Exploration	Date Started	5/29/07	Completed 5/29/07
Supervisor	Dan Brown	Driller	Tim Caudill	Depth to Water N/A
Logged By	Dan Brown	Depth to Water	N/A	Date/Time N/A

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois. Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
872.5	0.0	Top of Hole							
872.3	0.2	Grout							Thin Wall Core 8" Began Core Auger without sample Sample not saved
871.7	0.8	Concrete, coarse grained, uneven bottom							
871.5	1.0	Void							
871.0	1.5	Limestone Gravel, gray, angular, No. 57 size							
870.8	1.7	Auger Refusal							
		Limestone, gray, medium to fine grained, thin bedded very thin bedded, mottled and wavy bedding, shale interbeds >0.1' present, shale weathered and stained in upper 1.3'		32	5.0	5.0	100	6.7	
				74	5.0	5.0	100	11.7	
855.8	16.7			82	5.0	5.0	100	16.7	

Bottom of Hole

Top of Rock = 1.7
Elevation (870.8)

Fuller, Mossbarger, Scott and May Engineers, Inc.



SUBSURFACE LOG

Project Number <u>LX2007116</u>		Location <u>Jessamine County</u>	
Project Name <u>West Hickman WTP Clarifier Failure</u>		Boring No. <u>B-3</u>	Total Depth <u>4.3 ft</u>
County <u>Jessamine County, Kentucky</u>		Surface Elevation <u>872.49 ft</u>	
Project Type <u>Geotechnical Exploration</u>		Date Started <u>5/29/07</u>	Completed <u>5/29/07</u>
Supervisor <u>Dan Brown</u> Driller <u>Tim Caudill</u>		Depth to Water <u>N/A</u>	Date/Time <u>N/A</u>
Logged By <u>Dan Brown</u>		Depth to Water <u>N/A</u>	Date/Time <u>N/A</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
872.5	0.0	Top of Hole							
872.3	0.2	Grout							Thin Wall Core 8" Sample not saved Auger without sample
871.5	1.0	Concrete, Coarse grained, neoprene joint material at 0.4', uneven bottom							
871.3	1.2	Void							
868.2	4.3	Limestone Gravel, gray, angular, No. 57 size							
Auger Refusal / Bottom of Hole									



SUBSURFACE LOG

Project Number	LX2007116	Location	Jessamine County		
Project Name	West Hickman WTP Clarifier Failure	Boring No.	B-4	Total Depth	5.5 ft
County	Jessamine County, Kentucky	Surface Elevation	872.45 ft		
Project Type	Geotechnical Exploration	Date Started	5/29/07	Completed	5/29/07
Supervisor	Dan Brown	Driller	Tim Caudill	Depth to Water	N/A
Logged By	Dan Brown	Depth to Water	N/A	Date/Time	N/A

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois. Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
872.5	0.0	Top of Hole							
872.3	0.2	Grout							Thin Wall Core 8" Sample not saved Auger shifted from vertical by partial refusal
871.1	1.4	Concrete, coarse grained, uneven bottom							
870.9	1.6	Void							
		Limestone Gravel, gray, angular, No. 57 size, stained black at top							
867.0	5.5								

Auger Refusal / Bottom of Hole

Hole abandoned because tools skewed toward vault pit, apparently "walking" down side of bedrock excavated for vault pit.

10-31 LEGACY LX2007116 07-11-07 11:50:01 AM



SUBSURFACE LOG

Project Number	LX2007116	Location	Jessamine County	
Project Name	West Hickman WTP Clarifier Failure	Boring No.	B-5	Total Depth 2.0 ft
County	Jessamine County, Kentucky	Surface Elevation	872.51 ft	
Project Type	Geotechnical Exploration	Date Started	5/29/07	Completed 5/29/07
Supervisor	Dan Brown Driller Tim Caudill	Depth to Water	N/A Date/Time N/A	
Logged By	Dan Brown	Depth to Water	N/A Date/Time N/A	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois. Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
872.5	0.0	Top of Hole							
872.3	0.2	Grout							Thin Wall Core 8"
871.5	1.0	Concrete, coarse grained, uneven bottom							Auger without sample
871.2	1.3	Void Limestone Gravel, gray, angular, No. 57 size, upper gravels stained black Auger Refusal / Bottom of Hole							Sample not saved
870.5	2.0								

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SUBSURFACE LOG

Project Number	LX2007116	Location	Jessamine County		
Project Name	West Hickman WTP Clarifier Failure	Boring No.	B-6	Total Depth	9.9 ft
County	Jessamine County, Kentucky	Surface Elevation	872.41 ft		
Project Type	Geotechnical Exploration	Date Started	5/29/07	Completed	5/29/07
Supervisor	Dan Brown	Driller	Tim Caudill	Depth to Water	N/A
Logged By	Dan Brown	Depth to Water	N/A	Date/Time	N/A

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois. Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
872.4	0.0	Top of Hole							
872.2	0.2	Grout							Thin Wall Core 8"
871.0	1.4	Concrete, coarse grained, uneven bottom							Sample not saved
870.8	1.6	Void							Auger without sample
		Limestone Gravel, gray, angular, No. 57 size							
862.5	9.9	Auger Refusal / Bottom of Hole							

FULLER, MESSINGER, SCOTT AND MAY ENGINEERS, INC.



SUBSURFACE LOG

Project Number	LX2007116	Location	Jessamine County	
Project Name	West Hickman WTP Clarifier Failure	Boring No.	B-7	Total Depth 2.0 ft
County	Jessamine County, Kentucky	Surface Elevation	872.49 ft	
Project Type	Geotechnical Exploration	Date Started	5/29/07	Completed 5/29/07
Supervisor	Dan Brown	Driller	Tim Caudill	Depth to Water N/A
Logged By	Dan Brown	Depth to Water	N/A	Date/Time N/A

Lithology		Description	Overburden	Sample #	Depth	Rec. Fl.	Blows	Mois. Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
872.5	0.0	Top of Hole							
872.3	0.2	Grout							Thin Wall Core 8" Sample not saved Auger without sample
871.5	1.0	Concrete, coarse grained, uneven bottom							
871.3	1.2	Void							
870.5	2.0	Limestone Gravel, gray, angular, No. 57 size							
		Auger Refusal / Bottom of Hole							

DATE: 05/29/07 10:00 AM BY: JAC/MSM



SUBSURFACE LOG

Project Number	LX2007116	Location	Jessamine County	
Project Name	West Hickman WTP Clarifier Failure	Boring No.	B-8	Total Depth 18.6 ft
County	Jessamine County, Kentucky	Surface Elevation	871.50 ft	
Project Type	Geotechnical Exploration	Date Started	5/29/07	Completed 5/29/07
Supervisor	Dan Brown Driller Tim Caudill	Depth to Water	N/A	Date/Time N/A
Logged By	Dan Brown	Depth to Water	N/A	Date/Time N/A

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois. Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
871.5	0.0	Top of Hole							
		Open air of vault box							No fresh contact between concrete and bedrock. No drop of tools between base of concrete and top of rock
865.1	6.4								Began Core
		Concrete, coarse grained							
863.1	8.4								
		Limestone, gray, medium to fine grained, thin bedded, mottled and wavy bedding, shale interbeds >0.1' present, shale beds stained black in upper 2.1'							Vertical fracture from 9.2' to 9.8', tight, no solutioning
				64	10.0	10.0	100	16.4	
852.9	18.6			46	2.2	2.2	100	18.6	

LX2007116.DWG / 5/29/07

Bottom of Hole
Top of Rock = 8.4
Elevation (863.1)



SUBSURFACE LOG

Project Number	LX2007116	Location	Jessamine County	
Project Name	West Hickman WTP Clarifier Failure	Boring No.	B-9	Total Depth 19.0 ft
County	Jessamine County, Kentucky	Surface Elevation	871.60 ft	
Project Type	Geotechnical Exploration	Date Started	5/30/07	Completed 5/30/07
Supervisor	Dan Brown Driller Tim Caudill	Depth to Water	N/A	Date/Time N/A
Logged By	Dan Brown	Depth to Water	N/A	Date/Time N/A

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois. Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
871.6	0.0	Top of Hole							
		Open air of vault box							No drop of tools between concrete-bedrock - soft zone >0.1' No visible contact between concrete to rock
865.2	6.4								Began Core
		Concrete, coarse grained							
862.9	8.7								
		Limestone, gray, medium to fine grained, thin bedded, mottled and wavy bedding, shale interbeds >0.1' present, shale weathered and stained in upper 1.1'							
				64	10.0	9.9	99	16.4	
852.6	19.0			3	2.6	2.6	100	19.0	
Bottom of Hole									
Top of Rock = 8.7 Elevation (862.9)									

HIGH LEGACY LOGGING & DRILLING, FARM ROAD 1000

Boring No.	Surveyed Elevation (ft.)	8/7/2007
B-1	872.47	
B-2	872.48	
B-3	872.45	
B-4	872.45	
B-5	872.41	
B-6	872.49	
B-7	871.50	
B-8	871.50	
B-9	871.50	

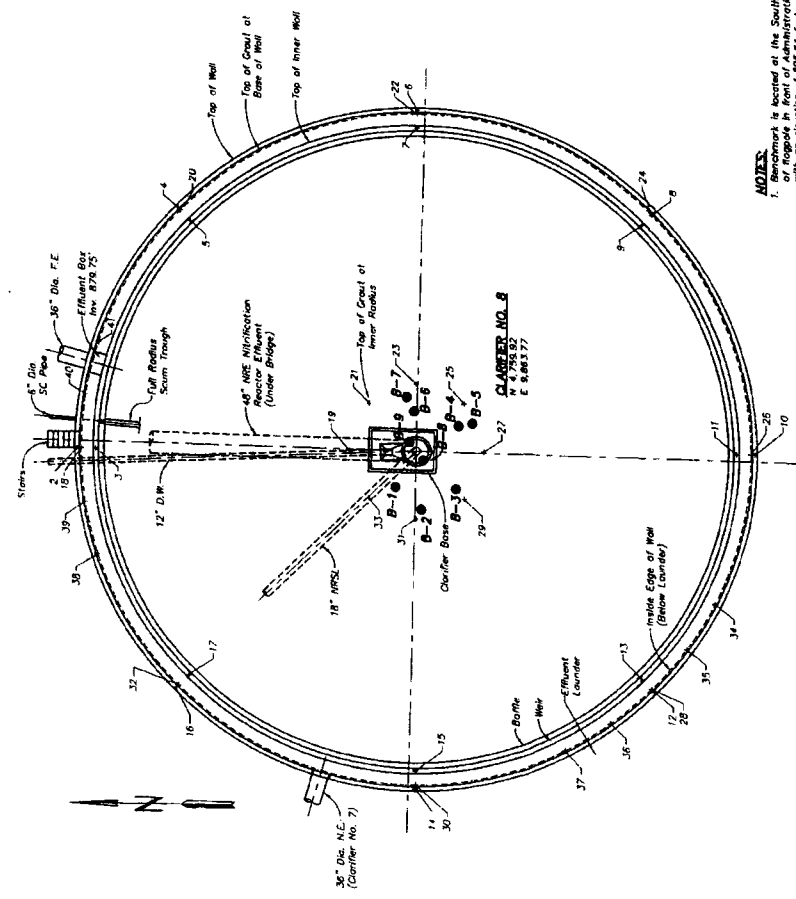
Point	Record Drawing Elevation (ft.)	Surveyed Elevation (ft.)	Difference (ft.)
2	887.60	887.59	-0.01
3	887.60	887.60	0.00
4	887.60	887.60	0.00
5	887.60	887.61	0.01
6	887.60	887.59	-0.01
7	887.60	887.59	-0.01
8	887.60	887.59	-0.01
9	887.60	887.57	-0.03
10	887.60	887.57	-0.03
11	887.60	887.57	-0.03
12	887.60	887.59	0.01
13	887.60	887.57	-0.03
14	887.60	887.57	-0.03
15	887.60	887.57	-0.03
16	887.60	887.57	-0.03

Point	Record Drawing Elevation (ft.)	Surveyed Elevation (ft.)	Difference (ft.)
18	873.45	873.61	0.16
19	873.45	873.53	0.08
20	873.45	873.53	0.08
21	873.45	873.53	0.08
22	873.45	873.53	0.08
23	873.45	873.53	0.08
24	873.45	873.53	0.08
25	873.45	873.53	0.08
26	873.45	873.44	-0.01
27	873.45	873.44	-0.01
28	873.45	873.44	-0.01
29	873.45	873.44	-0.01
30	873.45	873.44	-0.01
31	873.45	873.44	-0.01
32	873.45	873.48	0.03
33	873.45	873.48	0.03
34	873.45	873.48	0.03
35	873.45	873.46	0.01
36	873.45	873.46	0.01
37	873.45	873.46	0.01
38	873.45	873.46	0.01
39	873.45	873.46	0.01
40	873.45	873.45	0.00
41	873.45	873.50	0.05

Point	Record Drawing Elevation (ft.)	Surveyed Elevation (ft.)	Difference (ft.)
1	885.39	885.47	0.08
2	885.39	885.47	0.08
3	885.39	885.47	0.08
4	885.39	885.47	0.08
5	885.39	885.47	0.08
6	885.39	885.47	0.08
7	885.39	885.47	0.08
8	885.39	885.47	0.08
9	885.39	885.47	0.08
10	885.39	885.47	0.08
11	885.39	885.44	0.05
12	885.39	885.44	0.05
13	885.39	885.44	0.05
14	885.39	885.45	0.06
15	885.39	885.45	0.06
16	885.39	885.43	0.04
17	885.39	885.43	0.04

Point	Record Drawing Elevation (ft.)	Surveyed Elevation (ft.)	Difference (ft.)
18	872.74	872.52	-0.22
19	872.74	872.52	-0.22
20	872.74	872.52	-0.22
21	872.74	872.52	-0.22
22	872.74	872.51	-0.23
23	872.74	872.51	-0.23
24	872.74	872.51	-0.23
25	872.74	872.51	-0.23
26	872.74	872.52	-0.22
27	872.74	872.52	-0.22
28	872.74	872.52	-0.22
29	872.74	872.52	-0.22
30	872.74	872.52	-0.22
31	872.74	872.52	-0.22
32	872.74	872.52	-0.22
33	872.74	872.52	-0.22
34	872.74	872.52	-0.22
35	872.74	872.52	-0.22
36	872.74	872.52	-0.22
37	872.74	872.52	-0.22
38	872.74	872.52	-0.22
39	872.74	872.52	-0.22
40	872.74	872.52	-0.22
41	872.74	872.52	-0.22

Point	Record Drawing Elevation (ft.)	Surveyed Elevation (ft.)	Difference (ft.)
18	853.00	853.12	0.12
19	853.00	853.12	0.12
20	853.00	853.12	0.12
21	853.00	853.12	0.12
22	853.00	853.12	0.12
23	853.00	853.12	0.12
24	853.00	853.12	0.12
25	853.00	853.12	0.12
26	853.00	853.12	0.12
27	853.00	853.12	0.12
28	853.00	853.12	0.12
29	853.00	853.12	0.12
30	853.00	853.12	0.12
31	853.00	853.12	0.12
32	853.00	853.12	0.12
33	853.00	853.12	0.12
34	853.00	853.12	0.12
35	853.00	853.12	0.12
36	853.00	853.12	0.12
37	853.00	853.12	0.12
38	853.00	853.12	0.12
39	853.00	853.12	0.12
40	853.00	853.12	0.12
41	853.00	853.12	0.12



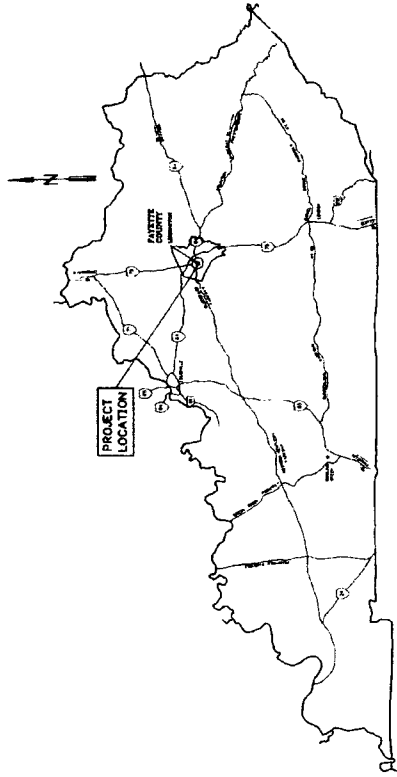
NOTES:
 1. Benchmark is located at the Southwest corner of Roggale in front of Administration Building with an elevation of 885.54 feet.
 2. Information for Clarifier No. 8 used in determination of relative difference obtained from record drawings dated 8/01/01 by JSM Engineers, Inc.

LEGEND:
 -21 Surveyed Elevation Location and Point Number
 • Boring Location

WEST HICKMAN
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CLARIFIER #8 MODIFICATIONS/REPAIRS
LEXINGTON, KENTUCKY

F.H.C.E. PROJECT NO. 20820AF

NOVEMBER 2011



LOCATION MAP

F.H. freeland harris
consulting engineers

201 west short street
suite 410
Lexington, Kentucky 40507
Telephone: (859) 252-6413
Fax: (859) 252-6418
Website: WWW.FHCE.COM
Lexington, KY Tucker, GA

INDEX OF DRAWINGS

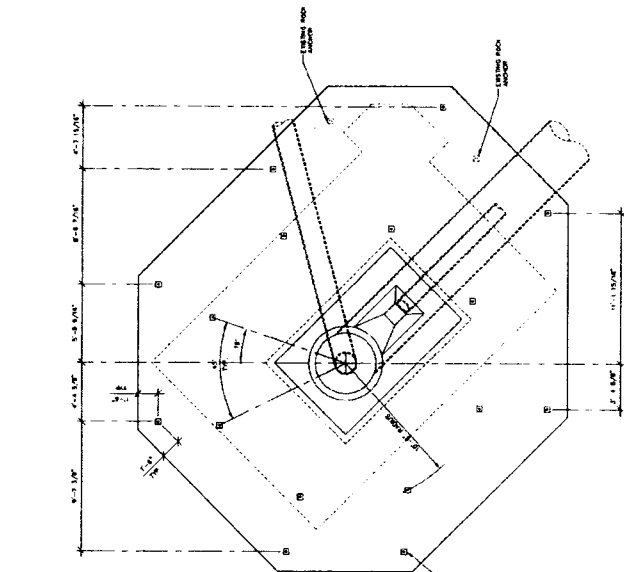
GENERAL

COVER Location Map and Index of Drawings

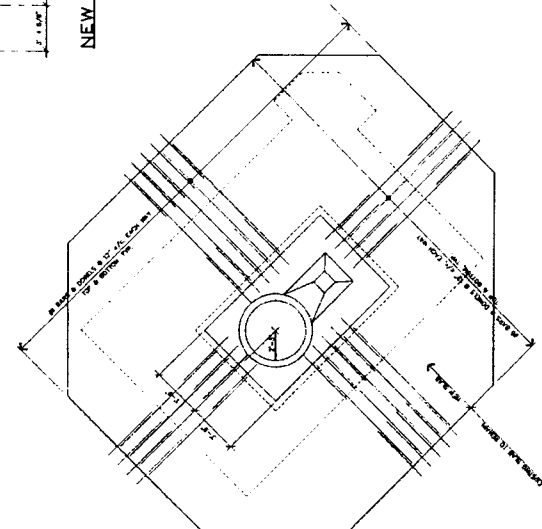
STRUCTURAL

S-1 General Notes & Keyplan
S-2 Final Clarifier Plan & Sections
S-3 Final Clarifier
S-4 Final Clarifier Sections

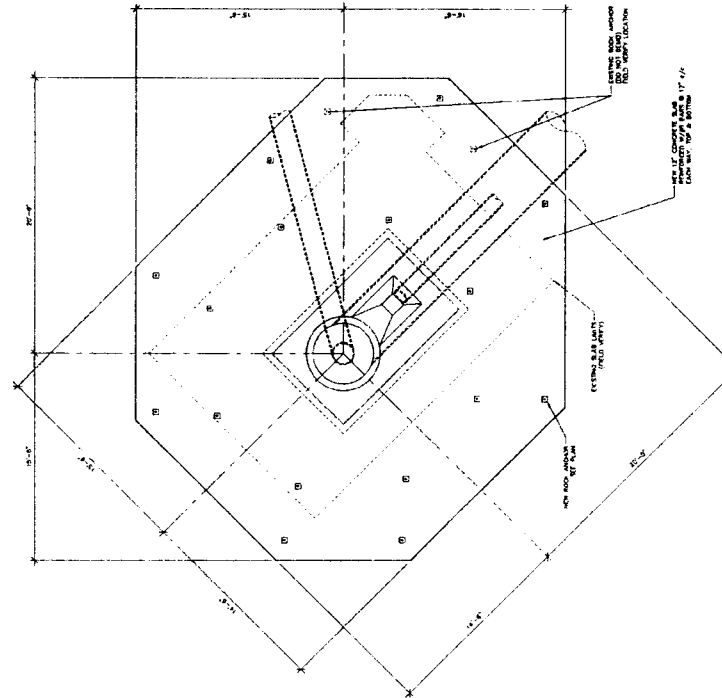
NO.	DATE	DESCRIPTION



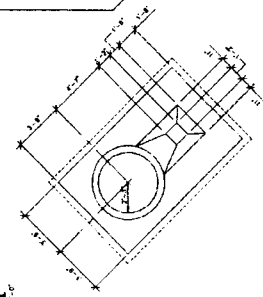
NEW ROCK ANCHOR
PLAN
SCALE 1/4" = 1'-0"



REBAR PLACEMENT
PLAN
SCALE 1/4" = 1'-0"



FINAL CLARIFIER #8
PLAN
SCALE 1/4" = 1'-0"



ENLARGED CENTER
PLAN
SCALE 1/2" = 1'-0"

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED. ALL DIMENSIONS SHALL BE CORRECTED AS NECESSARY AT THE CONTRACTOR'S RISK AND RESPONSIBILITY.

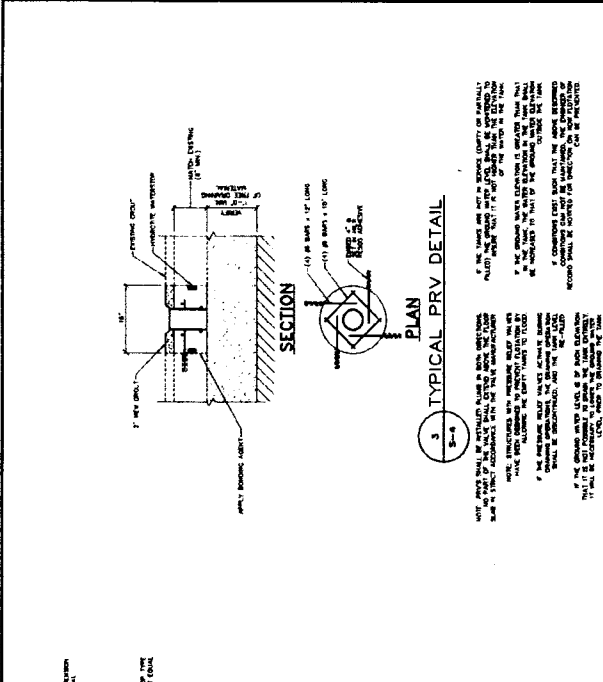
DATE	DESCRIPTION

WEST HICKMAN WWTP
ESSAUME COUNTY, KENTUCKY
REPAIR OF EXISTING CLARIFIER NO. 3

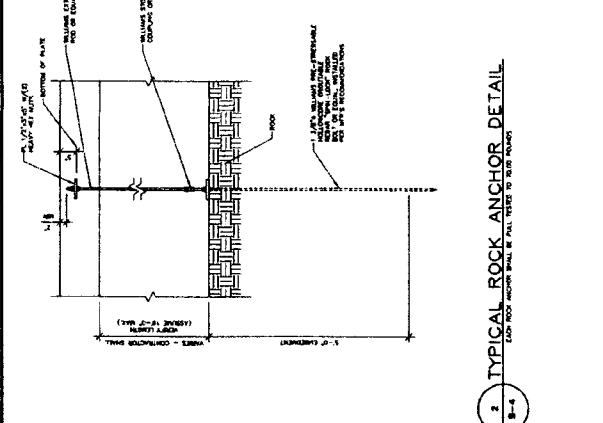
freeland harris
 consulting engineers

1900 GARDNER DRIVE
 SUITE 100
 LEXINGTON, KENTUCKY 40507

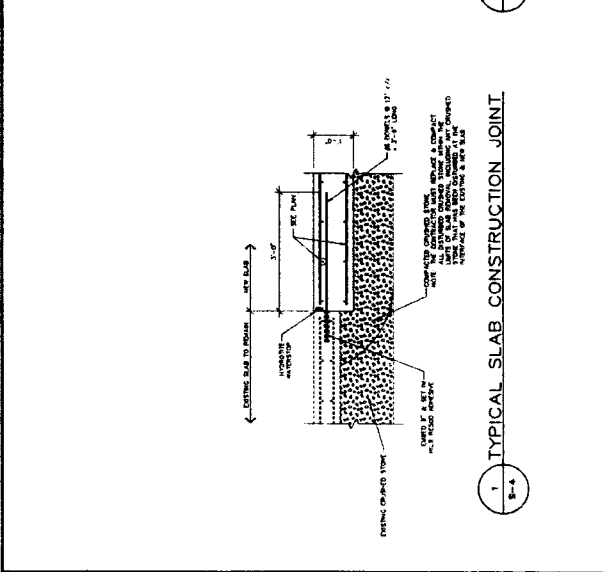
DATE: 10/12/2006



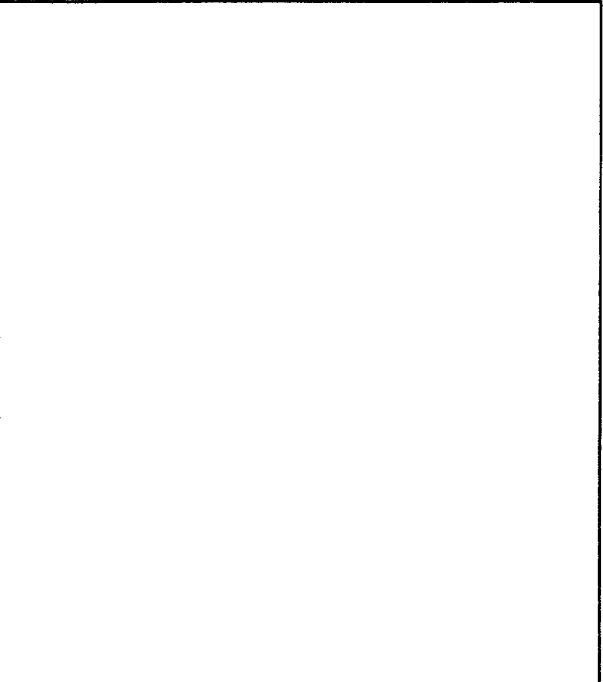
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8-4



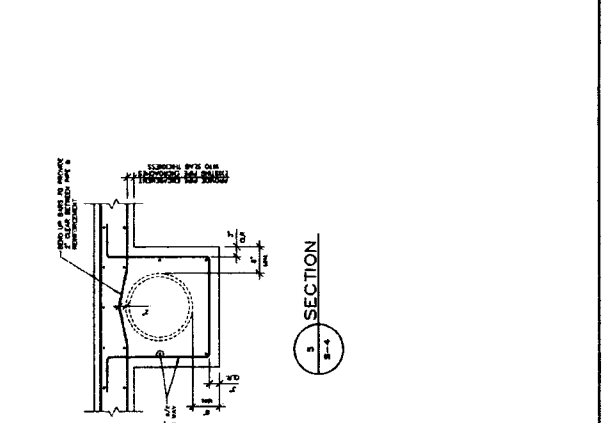
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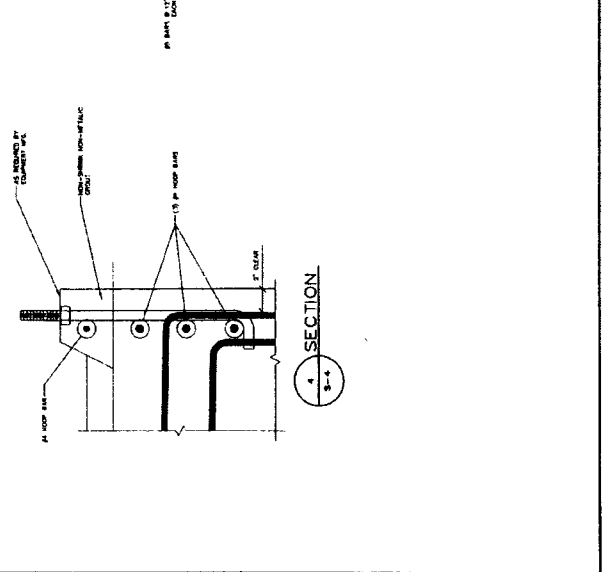
3
8-4



4
8-4



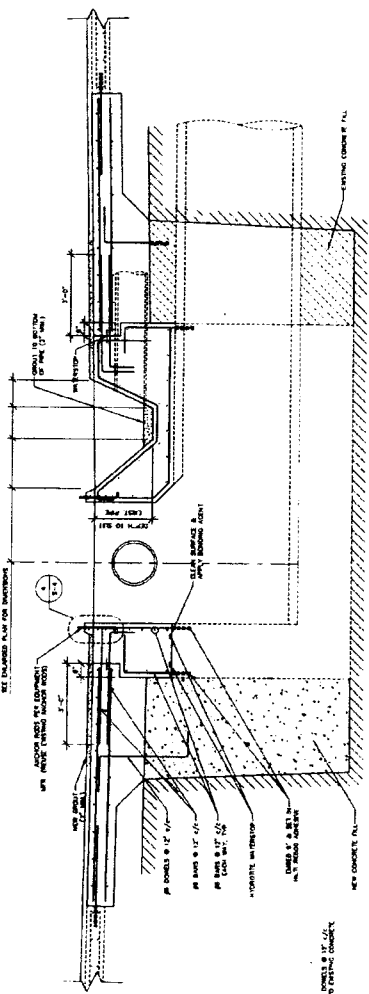
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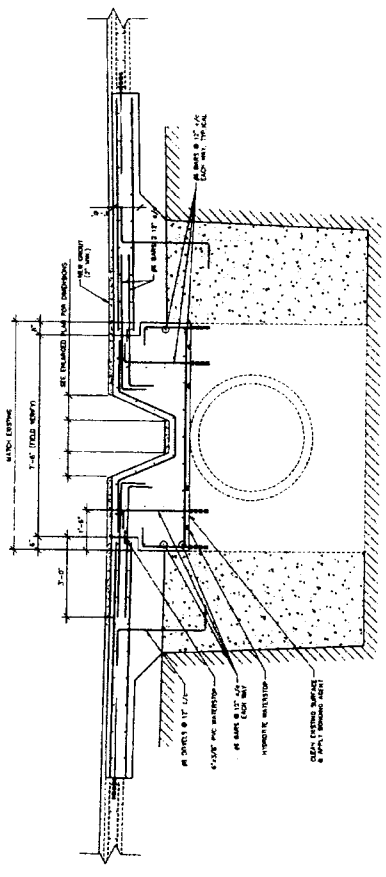
6
8-4

freeland horris
 consulting engineers
 1880 CHANDLER ROAD
 LEXINGTON, KENTUCKY 40507
 TEL: 254-1200
 FAX: 254-1200

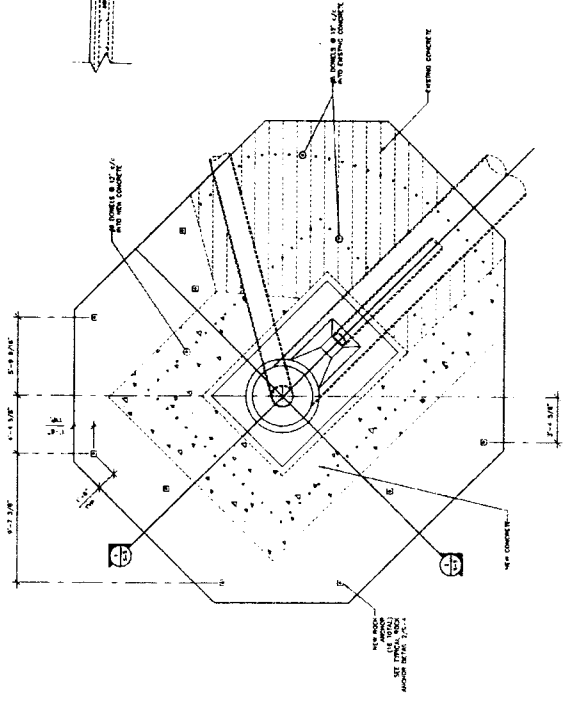
NO.	REVISION	DATE	DESCRIPTION
1	AS SHOWN	12/1/82	ISSUE FOR CONSTRUCTION



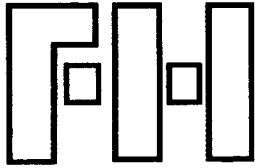
1 SECTION
8-3



2 SECTION
8-5



NEW ROCK ANCHOR
PLAN
SCALE: 1/4\"/>



**freeland harris
consulting engineers**

201 west short street • suite 410
lexington, kentucky 40507 • (859) 252-6413

Field Report No. 051115

West Hickman Wastewater Treatment Plant

Report Date: May 11, 2015
Report by: Eddie Alexander, PE
Subject: Clarifiers No. 7 and 8
West Hickman Wastewater Treatment Plant
Jessamine County, KY

On May 11, 2015 I visited the West Hickman Wastewater Treatment Plant at the request of Tiffany Rank. The purpose of the visit was to observe some apparent damage to existing Clarifiers No. 7 and 8.

Once on site, I met with Jim Worten. Mr. Worten explained that they had recently drained the two clarifiers for the purpose of conducting maintenance on the clarifiers. While empty, a significant rain event occurred, resulting in flooding in the nearby West Hickman Creek. Shortly after the rain event, the apparent damage was discovered.

Clarifier No. 7

Clarifier No. 7 was visually inspected and found to contain damage consistent with flotation due to ground water pressure. The observed damage consists of a crack in the drain box and separation of the grout topping from the base slab. This damage is similar in nature to that observed to Clarifier No. 8 due to a flood event of September, 2006, and later repaired in 2011/2012.

Clarifier No. 7 contains wall mounted pressure relief valves. At the time of my visit, there was no noticeable water entering the basin through these relief valves.

It's apparent that Clarifier No. 7 will require structural repairs, similar to those made to Clarifier No. 8 in 2011/2012. The full extent of the necessary repairs cannot be confirmed until the equipment and damaged concrete has been removed.


Clarifier No. 8

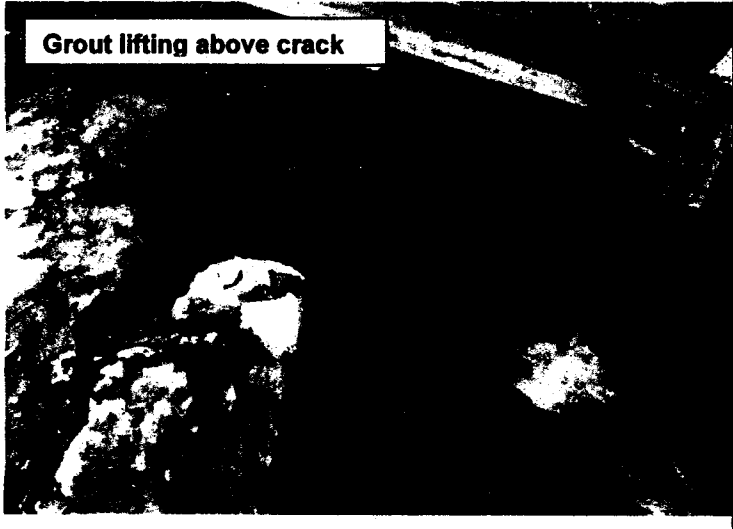
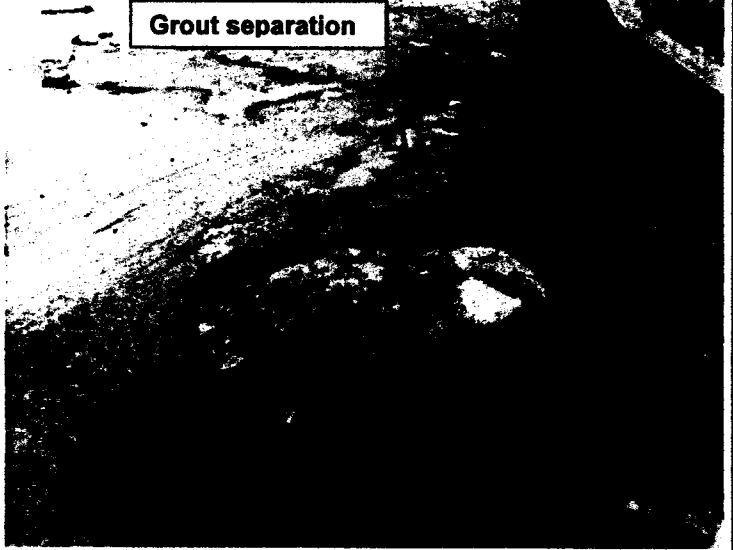
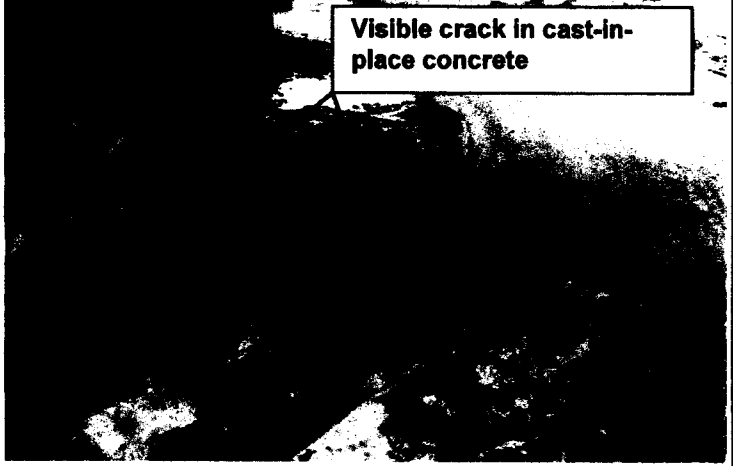
Clarifier No. 8 was visually inspected in a similar manner as Clarifier No. 7. The observed damage to Clarifier No. 8 appears to be less than that of Clarifier No. 7, and is mostly limited to the lifting of the grout topping due to a void in the base slab. The void was estimated to be two to three feet in diameter, and located at the joint between the original base slab, and the new concrete that was placed during the remedial work of 2011/2012.

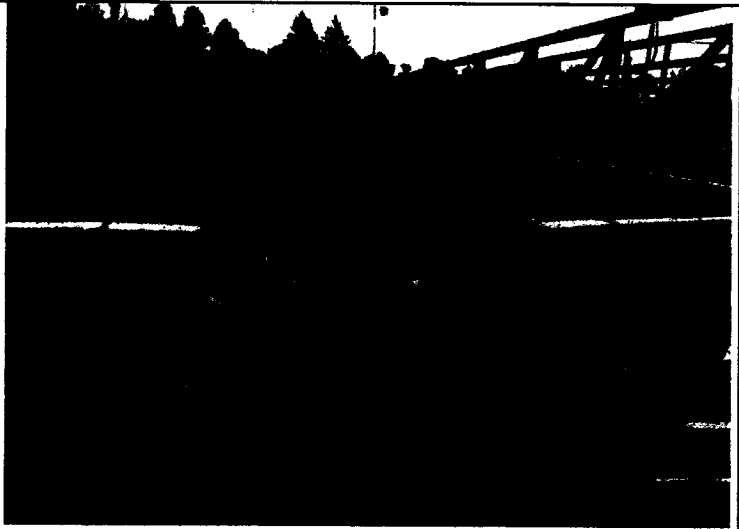


The limits and cause of the damage was not obtainable at the time of the inspection due to the inflow of water into the basin through the void.

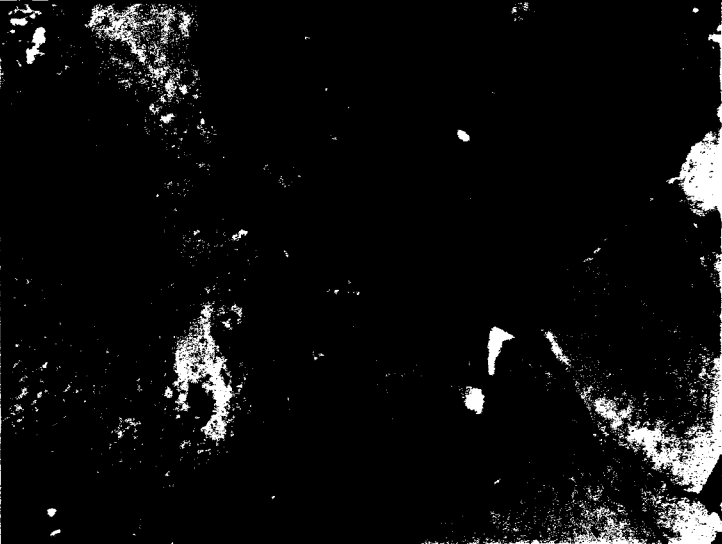
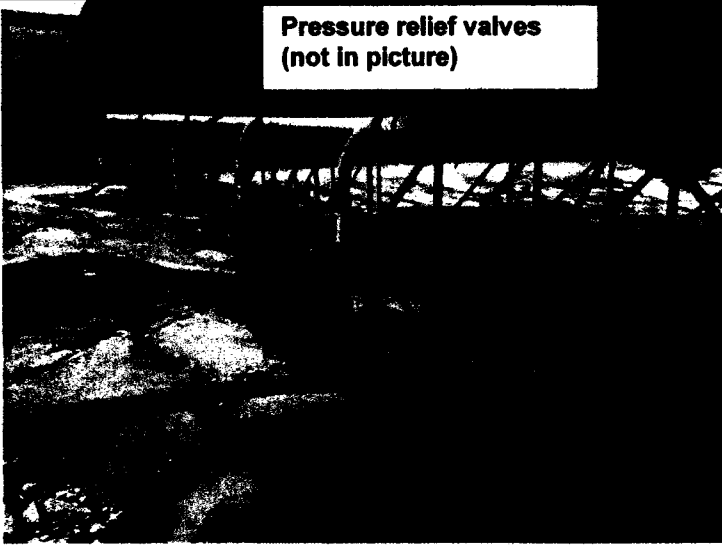
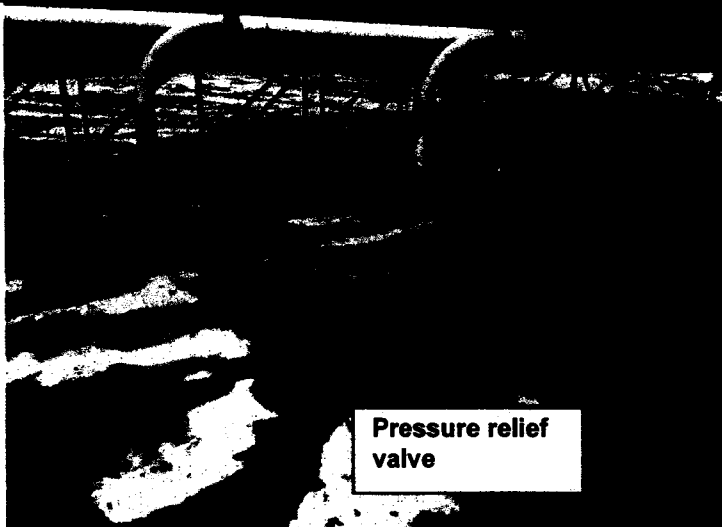
At the time of the visual inspection, there was water entering the clarifier through the base slab pressure relieve valves, thus indicating the presence of ground water. These pressure relief valves were installed as part of the remedial work that was made to the Clarifier during 2011/2012. The purpose of adding these relief valves was to minimize the potential for large scale damage due to high ground water. At this time, the relief valves appear to have provided this additional protection.

I expect that Clarifier No. 8 will require repair work consisting of patching the observed void, and removal and replacement of any loose grout topping. A follow-up inspection will be required to confirm the extent of the work, once the ground water is low enough to prevent groundwater from entering the basin through the slab void.

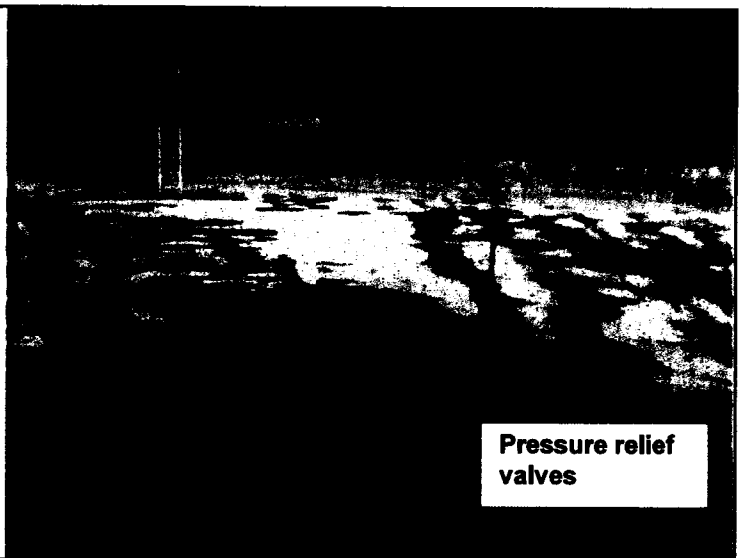
1.	Overall view of Clarifier No. 7	
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2.	Clarifier No. 7; Photo of grout topping separation from cast in place concrete.	 <p data-bbox="768 178 1115 220">Grout lifting above crack</p>
3.	Clarifier No. 7; Photo of grout topping separation from cast in place concrete.	 <p data-bbox="867 751 1115 793">Grout separation</p>
4.	Clarifier No. 7; Photo of visible crack in cast-in-place concrete.	 <p data-bbox="1065 1344 1428 1417">Visible crack in cast-in-place concrete</p>

5.	Overall view of Clarifier No.8	 A black and white photograph showing a wide view of a large industrial clarifier. The structure is a large, rectangular basin with a metal walkway or railing along the top edge. The background shows a line of trees under a clear sky.
6.	Clarifier No. 8; Damage to grout topping. Some of the damaged grout had been disturbed by operator prior to my visit (note sledge hammer)	 A black and white photograph showing a close-up view of the grout topping on the clarifier. The surface is uneven and appears to be in poor condition, with some areas that look like they have been broken up or disturbed. A sledge hammer is visible in the foreground, lying on the ground.
7.	Clarifier No. 8; Damage to grout topping.	 A black and white photograph showing another close-up view of the grout topping on the clarifier. The surface is heavily damaged and uneven, with large chunks of grout missing or broken up. A sledge hammer is visible in the foreground, lying on the ground.

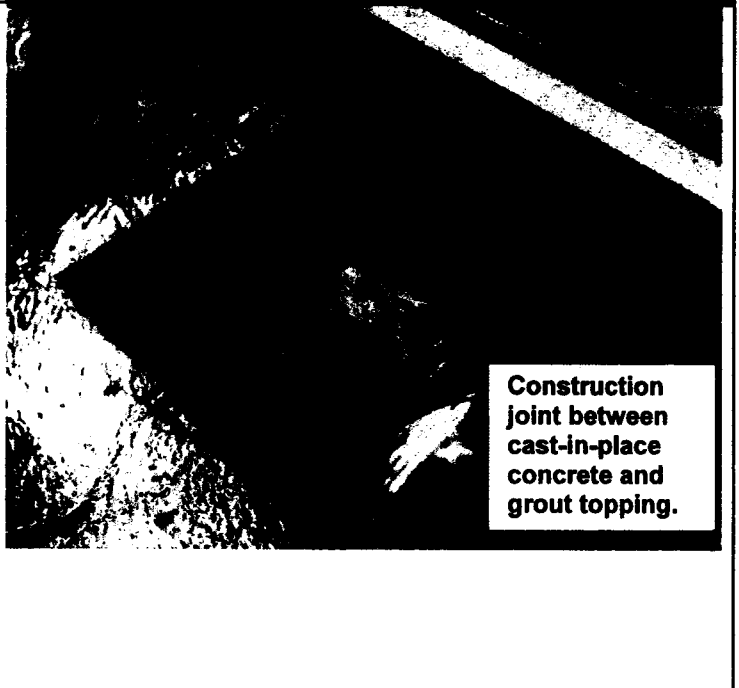
<p>8.</p>	<p>Clarifier No. 8; Observed damage to joint between existing cast-in-place concrete and new cast-in-place concrete that was placed as part of the remedial work conducted in 2011/2012.</p>	
<p>9.</p>	<p>Clarifier No. 8; Ground water entering basin thru pressure relieve valves.</p>	 <p>Pressure relief valves (not in picture)</p>
<p>10.</p>	<p>Clarifier No. 8; Ground water entering basin thru pressure relieve valves.</p>	 <p>Pressure relief valve</p>

11. Clarifier No. 8; Ground water entering basin thru pressure relieve valves in base slab. Pressure relief valves in walls not active.

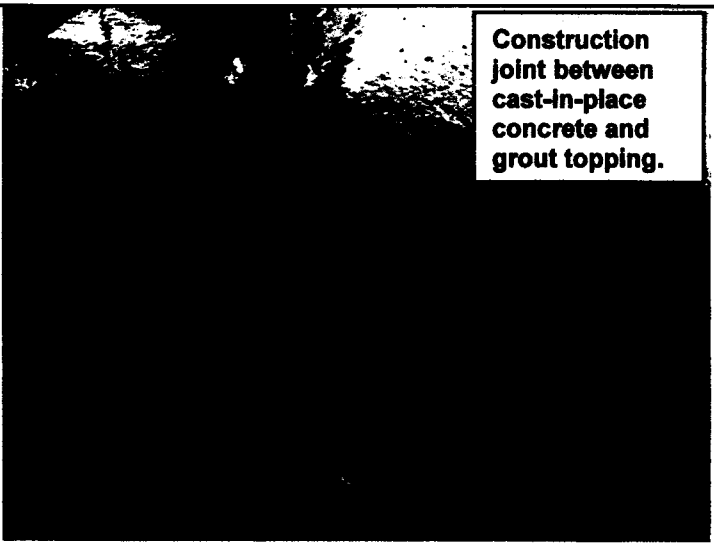


Pressure relief valves

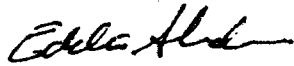
12. Clarifier No. 8: Photo of existing sludge hopper (constructed as part of the remedial work conducted in 2011/2012). No apparent cracks or separation between cast-in-place concrete and topping was observed.



Construction joint between cast-in-place concrete and grout topping.

13.	<p>Clarifier No. 8: Photo of existing sludge hopper (constructed as part of the remedial work conducted in 2011/2012). No apparent cracks or separation between cast-in-place concrete and topping was observed.</p>	 <p data-bbox="1222 126 1453 294">Construction joint between cast-in-place concrete and grout topping.</p>
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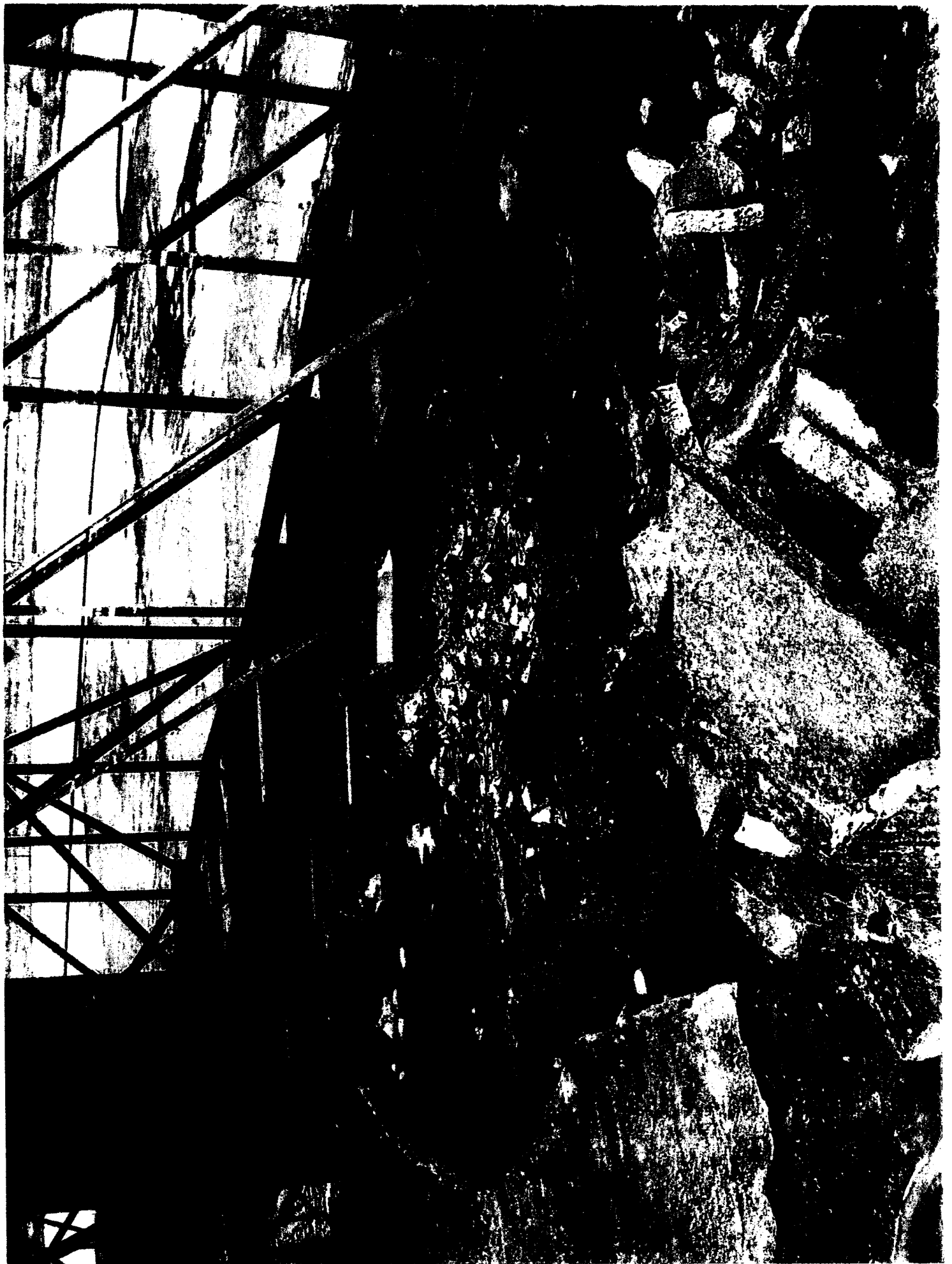
Eddie Alexander, PE



Vice President
Freeland Harris Consulting Engineers















01.28.2018



04.29.2016

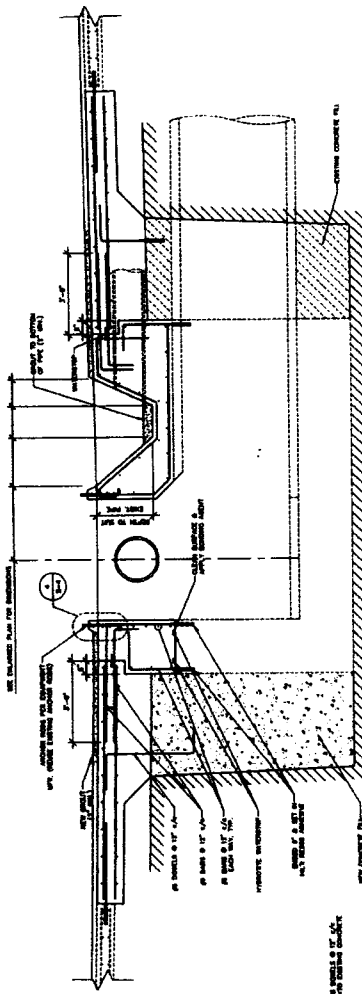




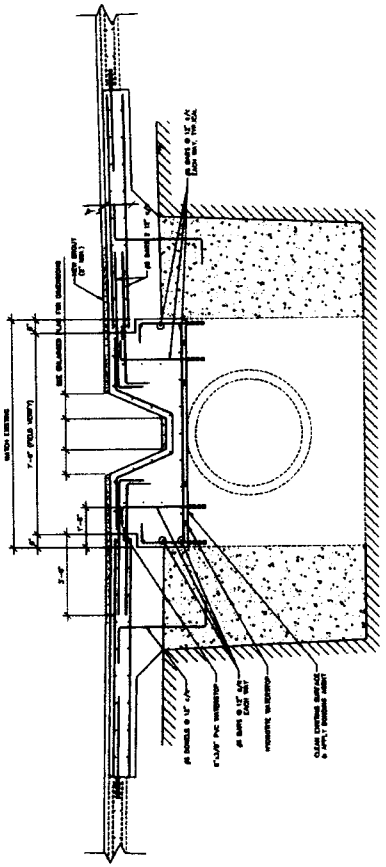
freeland harris consulting engineers

501 West Short Street
 Suite 410
 Lexington, Kentucky 40507
 1800 Incredible Parkway
 Suite 120
 Turner, Georgia 30084

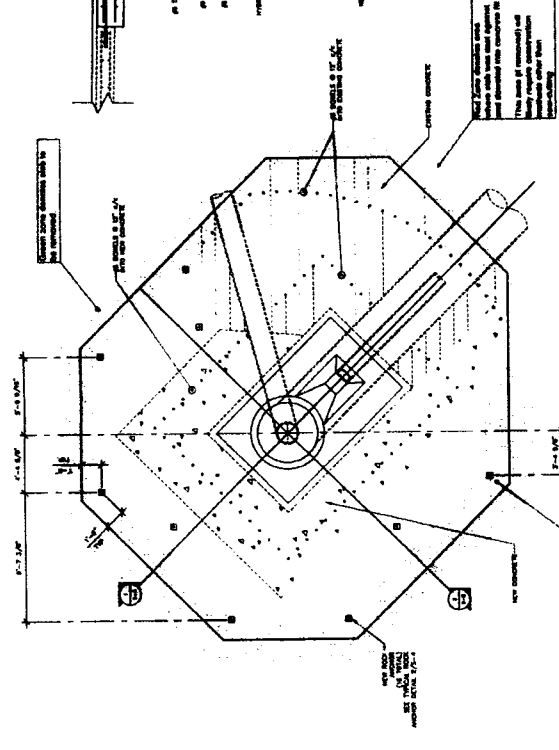
NO.	DATE	DESCRIPTION



SECTION 1



SECTION 2



**NEW ROCK ANCHOR
 PLAN**
 DATE: 10/17/10

ALL TYPED DIMENSIONS UNLESS OTHERWISE NOTED SHALL BE IN FEET AND INCHES. THIS PLAN IS FOR INFORMATION ONLY AND SHALL NOT BE USED FOR CONSTRUCTION WITHOUT THE APPROVAL OF THE ENGINEER.

EXISTING CONDITIONS IN AREA OF NEW ROCK ANCHOR (PREVIOUS WORK) ARE SHOWN WITH DOTTED LINES.

NEW ROCK ANCHOR SHALL BE SET IN 2\"/>

06.08.2016



















06.08.2016







MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #4

RFP Number: #41-2017

Date: October 13, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following changes to the above referenced RFP:

Pre-proposal sign in sheet is attached.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____





ADDENDUM #5

RFP Number: #41-2017

Date: October 17, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following changes to the above referenced RFP:

1. Page 32, E. Task 5, (5)

Would LFUCG consider providing the number of total hours for construction inspections as a standard number for bidders to estimate their bid? The current statement is open ended and allows the potential for variations which will affect bid prices. It seems that the cost per hour would be the important number for LFUCG.

Answer: LFUCG will not specify the total # of hours for construction inspections. Knowing the total hours and the Cost/Hour. We can back that out of the total Construction Administration Services when comparing the proposals.

2. Page 33, 5. Schedule and Completion:

We realize that the completion dates after December 2017 should be year 2018 but for record keeping would this be stated in an Addendum?

Answer: Please not the revision shown below for the Dates shown in Section 5 of the Request for Proposal (RFP).

Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection

Award Design Contract
Meeting to Review Final Design – 90% Completion

December 2017
April 2017– 2018




Bid Opening
Award of GC Contract

May ~~2017~~ 2018
June ~~2017~~ 2018

3. Page 31, Task 3, (1) Detailed Design

Subsection (1) lists progress meetings at the 25%, 50% and 90% design stages. On page 33, Schedule and Completion only lists a design review meeting at the 90% stage. Please clarify if 3 or only 1 design review meetings are required.

Answer: There are 3 required meetings: 25%, 50% and 90% design stages. LFUCG is suggesting the date of the 90% design meeting to make sure the project is on schedule at that point. The other 2 will be scheduled by the consultant as the design progresses.



Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #6

RFP Number: #41-2017

Date: October 24, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following changes to the above referenced RFP:

Sheet S-3 is attached.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____



EXHIBIT B

CERTIFICATE OF INSURANCE





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
12/12/2017

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 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 Marsh USA, Inc. 1166 Avenue of the Americas New York, NY 10036 Attn: NewYork.certs@Marsh.com Fax: (212) 948-0500	CONTACT NAME: PHONE (A/C, No. Ext): E-MAIL ADDRESS:		FAX (A/C, No.):																				
	<table border="1"> <thead> <tr> <th colspan="2">INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A : Hartford Fire Insurance Company</td> <td></td> <td>19682</td> </tr> <tr> <td>INSURER B : Hartford Casualty Insurance Company</td> <td></td> <td>29424</td> </tr> <tr> <td>INSURER C : Twin City Fire Insurance Company</td> <td></td> <td>29459</td> </tr> <tr> <td>INSURER D : N/A</td> <td></td> <td>N/A</td> </tr> <tr> <td>INSURER E :</td> <td></td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> <td></td> </tr> </tbody> </table>			INSURER(S) AFFORDING COVERAGE		NAIC #	INSURER A : Hartford Fire Insurance Company		19682	INSURER B : Hartford Casualty Insurance Company		29424	INSURER C : Twin City Fire Insurance Company		29459	INSURER D : N/A		N/A	INSURER E :			INSURER F :	
INSURER(S) AFFORDING COVERAGE		NAIC #																					
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INSURER C : Twin City Fire Insurance Company		29459																					
INSURER D : N/A		N/A																					
INSURER E :																							
INSURER F :																							
INSURED HAZEN AND SAWYER 498 SEVENTH AVENUE NEW YORK, NY 10018																							

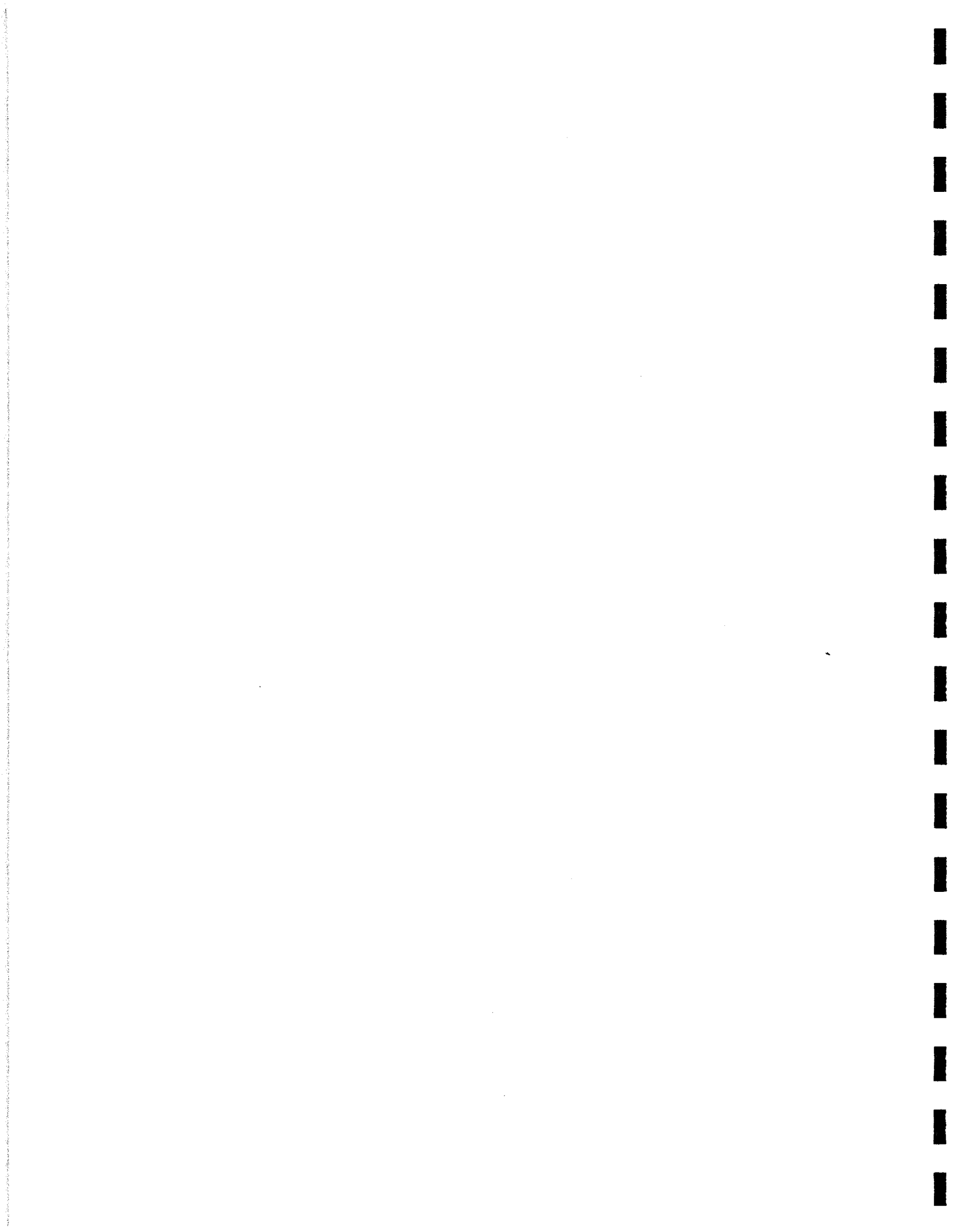
COVERAGES **CERTIFICATE NUMBER:** NYC-007732235-18 **REVISION NUMBER:** 7

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 type="checkbox"/> LOC <input type="checkbox"/> OTHER:			10 UUN UU0890	03/29/2017	03/29/2018	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 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 \$
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS			10UENUU0960 (AOS) 10UENAN2667 (MA)	03/29/2017 03/29/2017	03/29/2018 03/29/2018	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Comp./Coll. Deductible \$ 1,000
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
C	<input checked="" type="checkbox"/> 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/A	10 WB AS4398	03/29/2017	03/29/2018	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER 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)
LEXINGTON FAYETTE URBAN COUNTY GOVERNMENT IS INCLUDED AS ADDITIONAL INSURED (EXCEPT WORKERS COMPENSATION) WHERE REQUIRED BY WRITTEN CONTRACT.

CERTIFICATE HOLDER LEXINGTON FAYETTE URBAN COUNTY GOVERNMENT 200 EAST MAIN STREET LEXINGTON, KY 40507	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 of Marsh USA Inc. Manashi Mukherjee <i>Manashi Mukherjee</i>
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HAZE&SA-01

KCOLLINS

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 12/12/2017

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: Ames & Gough, 8300 Greensboro Drive, Suite 980, McLean, VA 22102. CONTACT NAME: admin@amesgough.com. PHONE (A/C, No, Ext): (703) 827-2277. FAX (A/C, No): (703) 827-2279. INSURER(S) AFFORDING COVERAGE: Continental Casualty Company (CNA) A, XV. NAIC #: 20443.

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.

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

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER: Lexington-Fayette Urban County Government, 200 East Main Street, Lexington, KY 40507. 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: Dan Knaus.



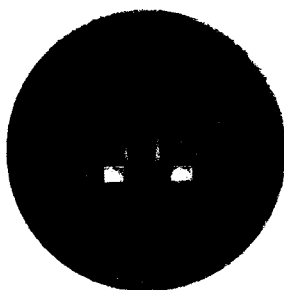
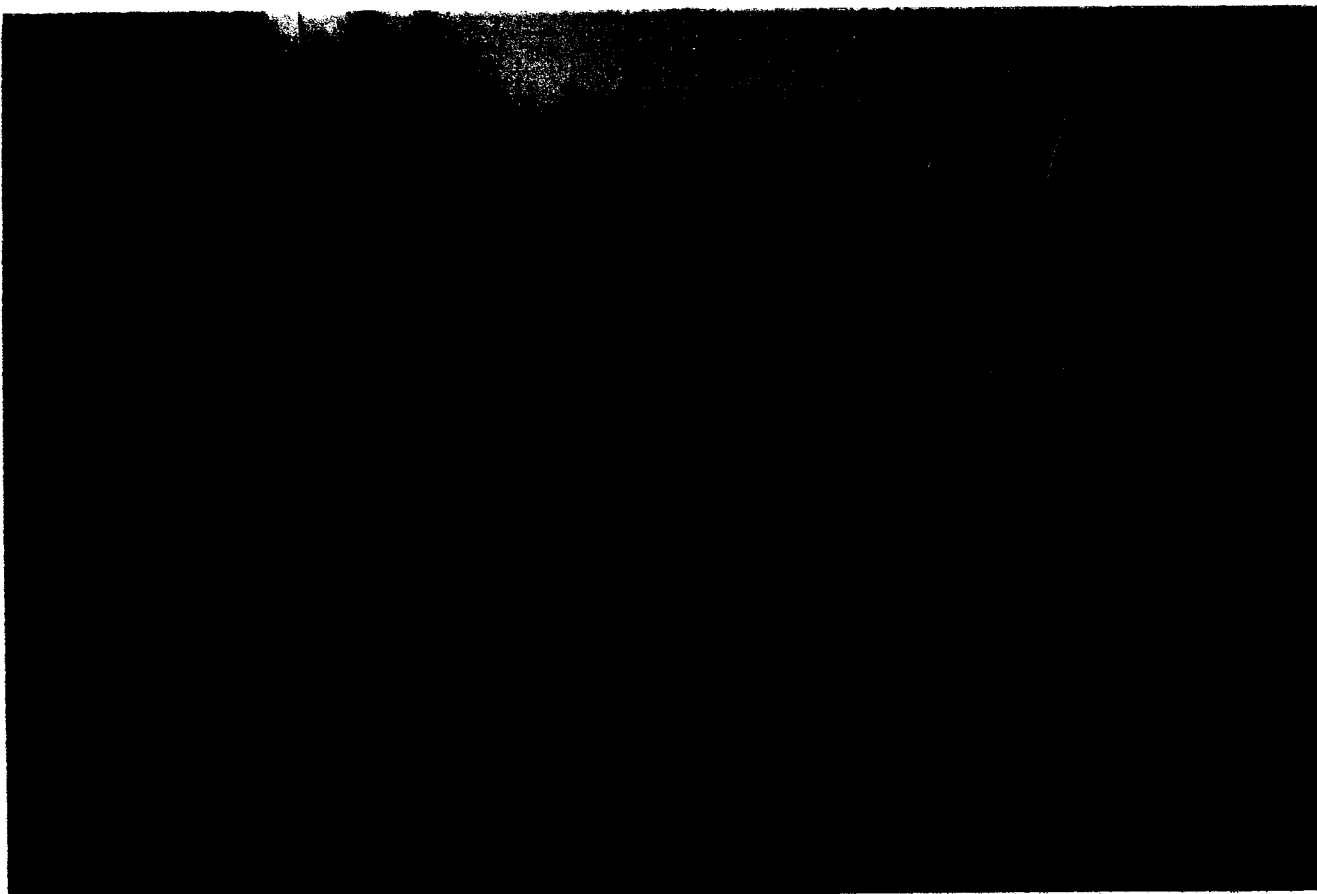
EXHIBIT C

PROPOSAL OF ENGINEERING SERVICES

AND RELATED MATTERS



Hazen



**Investigation/Design Services for West Hickman
WWTP Final Clarifiers #7 and #8 Structural
Repair Design/Construction Inspection**

RFP #41-2017 | October 30, 2017



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Technical Approach / Scope / Fee

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Similar Projects

Appendix A

**Affirmative Action Plan, Workforce Analysis, and MWDBE
Participation**

Appendix B

Affidavit

Appendix C

Addenda

Appendix D

General Provisions



Cover Letter







Hazen and Sawyer
230 Lexington Green Circle, Suite 520
Lexington, KY 40503 • 859.219.1126

October 30, 2017

Mr. Todd Slatin
Purchasing Director
Lexington-Fayette Urban County Government
Room 338, Government Center
200 East Main Street
Lexington, KY 40507

Re: Proposal for Investigation/Design Services for West Hickman WWTP Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection

Dear Mr. Slatin:

For more than 65 years Hazen and Sawyer (Hazen) has been dedicated to client-focused project delivery. From the beginning, and still today, our focus is “all things water” (wastewater, stormwater, and drinking/source water). We believe this focus provides us with a unique perspective and ability to support the Lexington-Fayette Urban County Government Division of Water Quality (DWQ) with the Investigation/Design Services for West Hickman WWTP Final Clarifier #7 and #8 Structural Repair Design/Construction Inspection project.

We look forward to the continued growth of the relationship Hazen has built with the DWQ over the past 9+ years. We have assembled an outstanding project team that brings focused experience and expertise to your project and still provides quality, personal local leadership with a proven record of successfully completing all components of wastewater projects. Kurt Zehnder, PE will be the Project Manager and your main contact for this project and I will serve as the Project Director.

Kurt and I will be supported by **Hazen’s top-notch structural engineering team consisting of Will Leadbitter, Kyle Ficker, and Chris Phillips who have a total combined experience of over 50 years in the structural design of wastewater infrastructure projects.** Because we solely focus on wastewater/water projects, Hazen’s structural engineering group only provides structural support of wastewater/water projects. Additionally, DWQ’s location in Kentucky allows Hazen to provide local, personal service from our Lexington Office; while being just over an hour’s drive from Hazen’s Midwest Regional Office in Cincinnati. Therefore, DWQ will be provided with the best nationally-recognized structural experts in the field being supported by local staff that you know and trust.


In selecting Hazen and our structural engineering experts, DWQ will have a depth of qualified resources that will rapidly deliver a permanent solution at the best value.

As demonstrated in this proposal, we believe Hazen is uniquely qualified to assist DWQ with this critical investigation and design. While elements of this project are common to most wastewater treatment projects, this project has unique challenges that must be addressed by focused and specialized structural engineers. This project is too important to the continued operation of the West Hickman WWTP to assume any site condition parameters. Therefore, Hazen has included both surveying and geotechnical services in our proposal. These services were not specifically requested in the RFP, but we deemed them necessary to successfully complete the design of this project for DWQ.

Our past and current clients can best represent Hazen's performance and quality of work. We encourage you to contact the client project references included in this proposal. The selection of the Hazen team for this project will result in an efficiently designed, structurally sound project.

We very much appreciate the opportunity to present our proposal to you for this project. As you review our proposal, we hope that you will agree that Hazen is the ideal choice to work with on this critical project.

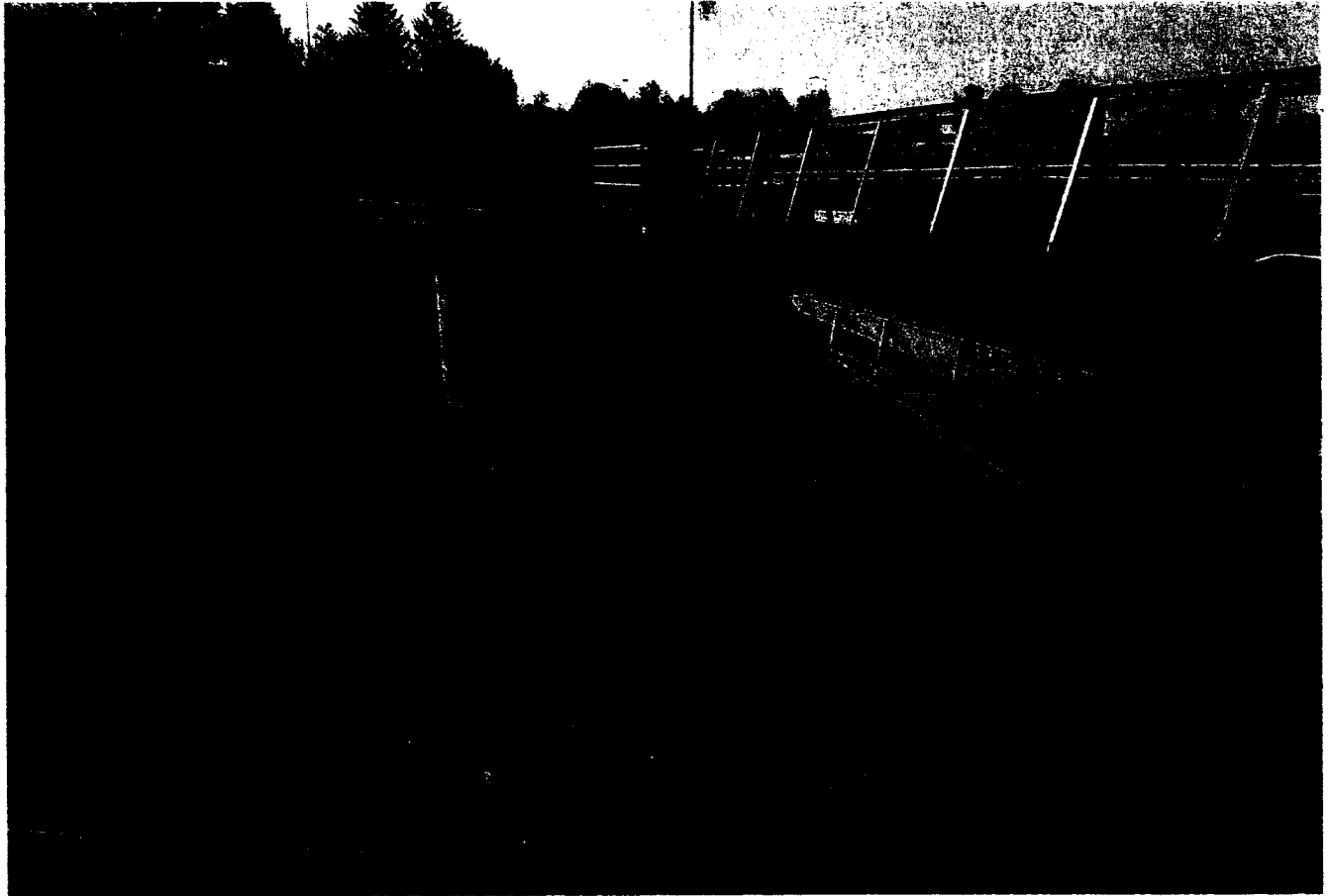
Very truly yours,

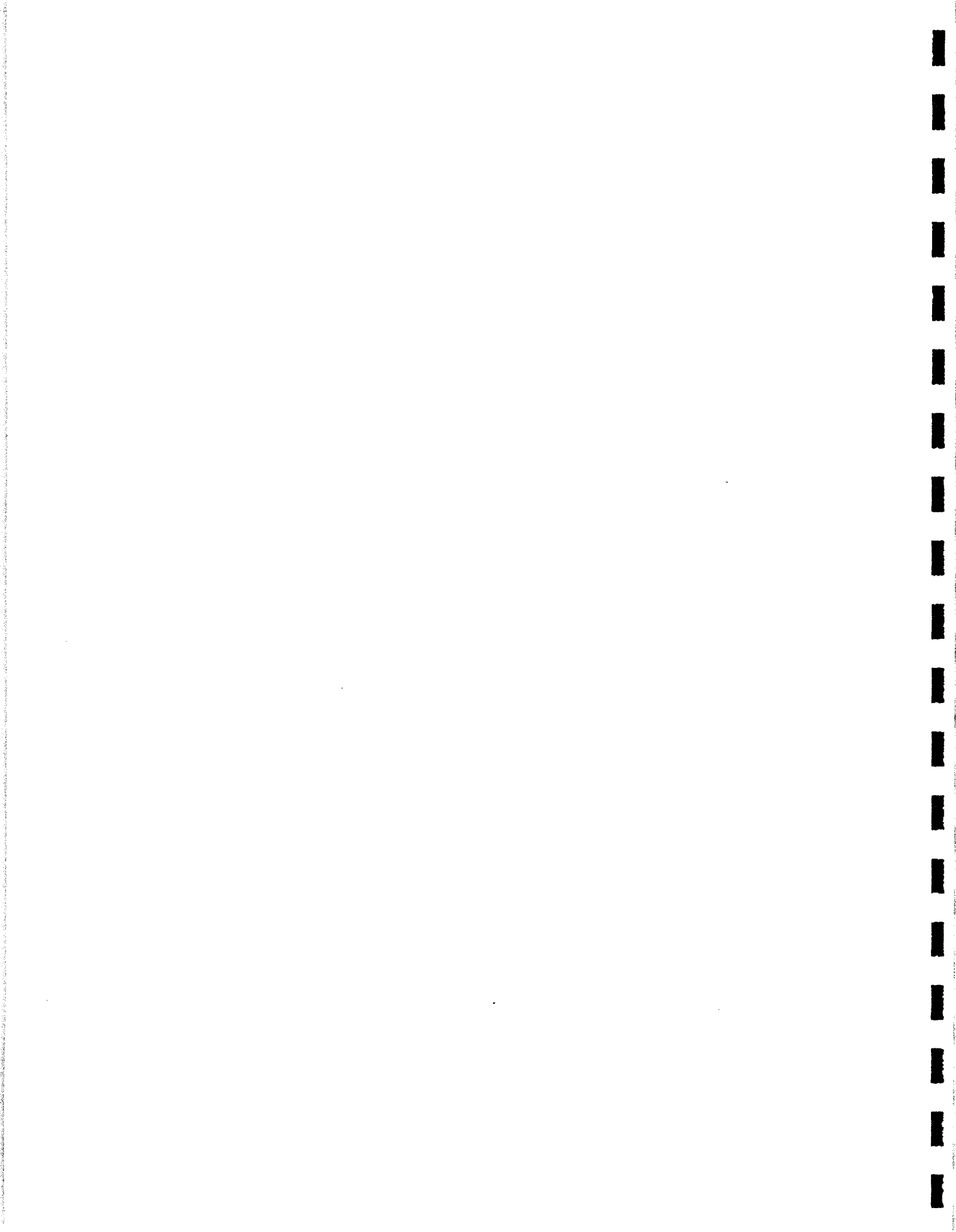


Jonathan E. Schubarth, PE

Senior Associate

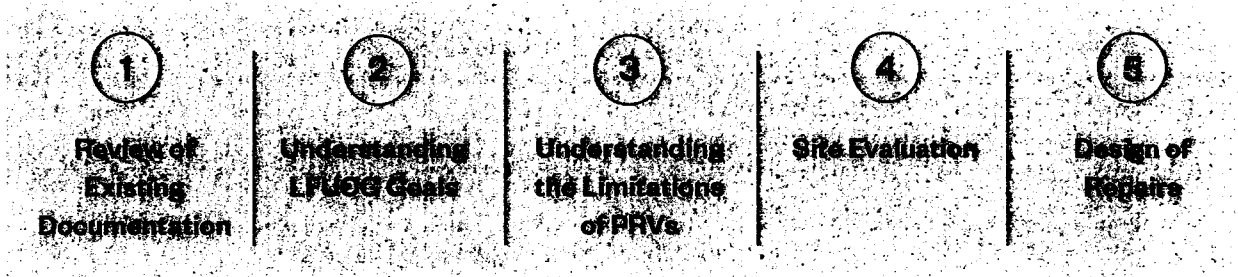
Technical Approach/Scope/Fee





Technical Approach / Scope / Fee

Key Aspects of our Technical Approach

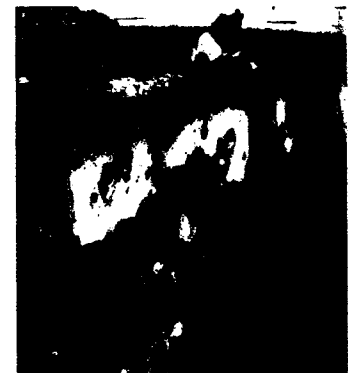


Consideration 1 - Review of Existing Documentation

This is a critical phase in developing a permanent solution for issues with Final Clarifiers #7 and #8. Hazen has already performed a detailed review of the 2000 design drawings, subsequent failure investigations and resulting repairs. Our initial conclusion is that the current clarifier issues can be traced back to the original design. The 2000 drawings show the interior “membrane” slab to be 8 inches thick, which we confirmed for Final Clarifier #8 during our site visit on October 17, 2017. At 8 inches, the interior slab is very thin and creates the following issues:

- Limited embedment depth for the steel anchor plate that connects each rock anchor to the slab
- Inadequate dead load to prevent slab uplift in the event of rock anchor failure

The thin slab and shallow connection of the anchor plate have allowed for a concrete breakout failure at the rock anchor connection as evidenced by the photo at right. In the event of rock anchor failure, it would be expected that pressure relief valves (PRVs) in the perimeter wall would act as a fail-safe. However, a closer look at the PRV design shows this will not be the case. The valves are 2 feet above the base and should be designed to account for an additional 1-foot of groundwater above the valve centerline as recommended by ACI 350.4R-04 - Design Considerations for Environmental Engineering Concrete Structures. Accounting for the 8 inch thickness of the base slab, the interior structure would see 3.67 feet of groundwater before the valves open or the equivalent of 230 pounds per square foot (psf) uplift. The 8-inch interior slab and 2-inch grout topping only provide 125 psf of downward resistance, assuming the clarifier is completely empty. Under this scenario the factor of safety against slab uplift is 0.54, significantly less than the required value of 1.25.

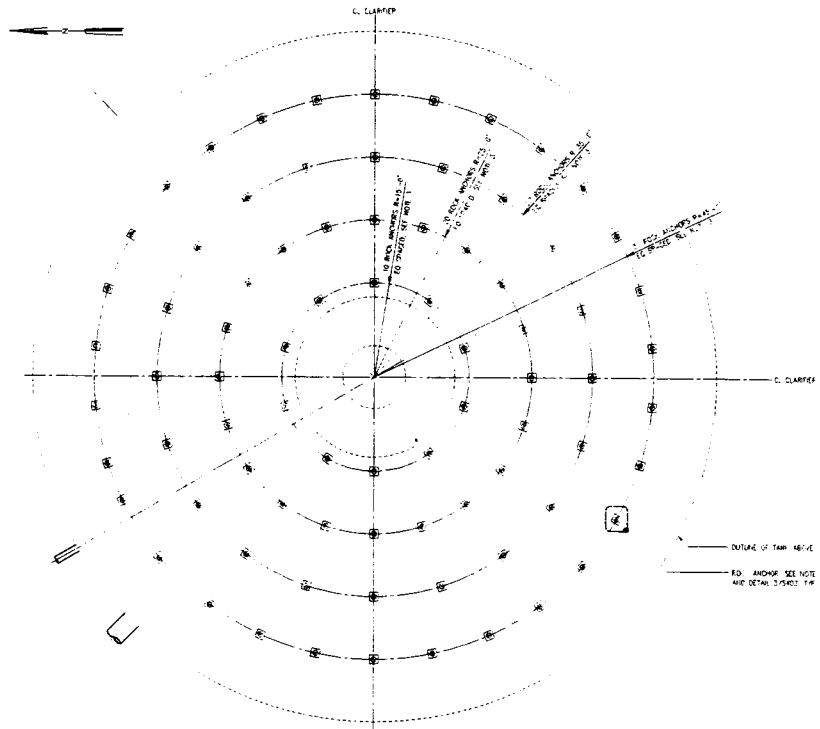


Concrete Breakout Failure

We believe the rock anchors and PRVs were originally intended to act in tandem with the rock anchors providing initial buoyancy resistance until groundwater levels became high enough to engage the PRVs. At this point the final clarifiers would begin to fill and equalize. However, the inoperable state of the PRVs prevents the system from functioning correctly. Note all PRVs were observed to be stuck in the closed position during our site visit. When groundwater rises above the PRVs and the final clarifiers cannot equalize there are several failure mechanisms that can occur. They are as follows:

- Failure of the rock anchor connection to the 8-inch membrane slab as noted above
- Cracking or heaving of the membrane slab
- Failure of the rock mass that is engaged by the rock anchor
- Failure of the rock anchor bond to the rock itself

Example of a Hazen Rock Anchor Plan



Our calculations indicate each rock anchor has an allowable capacity of approximately 18-kips based on a 7-foot rock socket. Under a scenario when groundwater rises above the PRVs, the PRVs are unable to open and the final clarifier is empty - this capacity is quickly exceeded. Thus, a second primary issue with the original design that we have identified is the limited capacity of the rock anchors due to shallow embedment.

1005-6888

Consideration 2 – Understanding LFUCG Goals

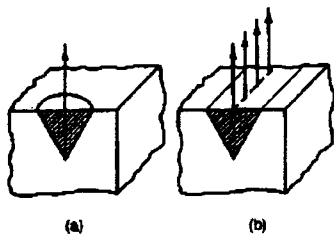
In discussions with LFUCG staff, it has been indicated that Final Clarifiers #7 and #8 were originally designed to be operated as an “active” system to prevent flotation. It is our understanding that this mode of operation requires additional filling of the clarifiers in the event of high groundwater. As stated in the RFP, the clarifier repairs will be based on “passive” operation. We agree with this approach and will evaluate the uplift system as a whole and provide a permanent solution for LFUCG requiring no operational efforts.

Consideration 3 – Understanding the Limitations of PRVs

Hazen is often tasked with evaluating the use of PRVs in design of wastewater structures. Based on our experience, we have identified the following drawbacks in using PRVs to resist buoyancy:

- PRVs can become clogged (especially in structures containing solids), inoperable, or damaged and thus the parent structure has a higher risk of failure with significant impact to treatment process
- High cost for remedial work if PRVs fail and catastrophic event occurs
- PRVs can create potential maintenance issues when attempting to drain a structure during a period of high groundwater, may not be possible to fully drain
- PRVs can affect treatment process when unwanted groundwater enters a structure in service
- PRVs require regularly scheduled maintenance to prevent them from clogging or corroding shut (which oftentimes is not performed)
- PRVs require proper installation of stone and filter fabric around tank exterior, can be damaged during backfilling operations
- PRVs may interfere with equipment such as final clarifier mechanisms, requires coordination during construction and installation of equipment

As evidenced by our site visit, several of these issues are relevant to design of repairs for Final Clarifiers #7 and #8. Notably, all wall-mounted PRVs in both final clarifiers are inoperable and Final Clarifier #8 has experienced additional failure after 20 pop-up type PRVs were retrofitted into the membrane slab in 2011. Based on the overall and West Hickman site specific issues with PRVs, we are extremely hesitant to use them as part of the final clarifier repair solution.



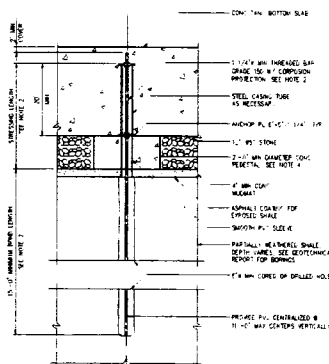
Tension Anchor System Analysis

Consideration 4 – Site Evaluation

In our site evaluation, we identified the following key features:

- Presence of a natural “spring” in the rock adjacent to Final Clarifiers #7 and #8 as noted by LFUCG staff
- West Hickman Creek located west of Final Clarifiers #7 and #8
- High ground east of the final clarifiers that “funnels” surface water towards the structures

The final clarifier walls are backfilled with #57 stone to a height of 2 feet below grade. There is also a 6-inch minimum layer of #57 stone under the structures, with additional stone placed where over-blasting occurred. Considering the possibility of normal groundwater, creek flooding and accumulation of surface water with the #57 stone surrounding the clarifiers acting as a porous layer to collect water, we believe the PRVs have an overall susceptibility to a rapid rise in groundwater. Under this scenario, the limited surface area of the PRV openings would not allow the final clarifiers to equalize fast enough.



TYPICAL ROCK ANCHOR
DETAIL
3
SAC

Typical Rock Anchor Detail

Consideration 5 - Design of Repairs

Based on our analysis of the original final clarifier design, site visit, discussions with LFUCG and review of failures/reports we have a thorough understanding of issues that have led to the foundation failures of Final Clarifiers #7 and #8. We currently believe the best repair is a total redesign of the membrane slab and rock anchors, but we will consider cost, construction duration, owner needs, and other critical factors in helping LFUCG select the repair protocol.

Based on visual inspection performed during our site visit we believe the perimeter wall, trough and 18-inch thickened base slab that extends 5 feet into the final clarifier interior can all be retained. In order to confirm the uplift events have not impacted the perimeter structural elements, we have included a new survey as part of our proposal.

We have also included limited geotechnical evaluation as part of our proposal. Knowing there are issues with the foundation, groundwater and rock anchors, we consider Geotechnology to be a key part of our team.

Summary

The Hazen team has developed a detailed approach based on the factors below. We are ready to develop a permanent solution for Final Clarifiers #7 and #8.

- Understanding of issues with the original design and subsequent repairs
- Knowledge of key site parameters
- Understanding of LFUCG need for a permanent “passive” solution
- Experienced design team with internal and external expertise

Detailed Engineering Fee Proposal

Task	Hourly Rate = \$190	\$140	\$115	
Task 1: Collection of Information				
Review Final Clarifiers #7 and #8 Original Design	2	2	6	
Review Damage and Repairs for Final Clarifier #8 in 2011	2		2	
Review Damage and Report for Final Clarifiers #7 and #8 in 2015	2		2	
Inspect Final Clarifiers #7 and #8	4	2	4	
Surveying by Subconsultant (Integrated Engineering - MBE)				
Geotechnical Investigation by Subconsultant (Geotechnology)				
Task 2: Development of Repair Concepts, Schedule, Phasing and Costs				
Conceptual Layout with Calculations for Each Concept Evaluated	8	6	16	
20-year Life Cycle and Present Worth Analysis for Each Conceptual Design	1	2	3	
Preliminary Cost Estimates and Implementation Schedules for Conceptual Designs	1	1	3	
Present PER to LFUCG Staff for Review of Conceptual Designs	8	2	8	
QA/QC	4	2		
Task 3: Detailed Design				
25% Design Drawings, Cost Estimate and Schedule	12	2	40	
25% Progress Meeting	4	4		
50% Design Drawings, Specifications, Cost Estimate and Schedule	30	8	90	
50% Progress Meeting	4	4		
90% Design Drawings, Specifications, Cost Estimate and Schedule	30	8	90	
90% Progress Meeting	4	4		
Calculations for Support of Equipment	2	2	4	
50% and Final 20-year Life Cycle and Present Worth Analysis	2	2	6	
50% and 90% QA/QC	6	2		
Task 4: Bidding Services				
Final Plans and Specifications	8	12	16	
Submit Permit Application to the KY DOW for Construction Permit	1	8	2	
Bidding Services Including Preparation of Advertisement	1	2	1	
Prebid Meeting	2	4		
Issue Addenda (2 total)	2	2	4	
Evaluate Bids and Provide Recommendation of Award	1	2	2	
Task 5: Construction Administration Services				
Shop Drawing Review (15 total)	8	10	20	
Track and Review Change Orders (2 total)	2	4	4	
Respond to RFIs (5 total)	2	5	2	
Coordinate and Lead Monthly Construction Progress Meetings (6 total)	6	15		
Construction Inspection, Photo Documentation and Weekly Reports by Subconsultant (Integrated Engineering - MBE)				
Review and Approve Contractor's Monthly Payment Applications (6 total)		12		
Attend and Maintain Test Reports for All Equipment Start-up		10		
Coordinate Final Inspection and Prepare Punch List	4	6		
Record Drawings	2	2	6	
Summary				
Labor Hours Subtotal	169	177	331	645
Labor Cost Subtotal				\$124,835
Task 1 Allowance-Exploratory Demolition Final Clarifier #8 (Free Contracting - WBE)				\$15,000
Task 1 Allowance-Exploratory Demolition Final Clarifier #7 (Free Contracting - WBE)				\$40,000
TOTAL FEE				\$179,835

Hazen Labor Classifications	
SA - Senior Associate (Schubarth, Leadbitter, Phillips)	
SPE - Senior Principal Engineer (Zehnder)	
PE - Principal Engineer (Ficker)	
SPD - Senior Principal Designer (Alvarez)	

MWDBE Subtotal	\$88,100
MWDBE % of Total Fee	48.99%

1005-688

**Investigation/Design Services for West Hickman WWTP
Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection**

Fee Schedule

(For a description of each task refer to Section 2 of the RFP)

Section 2

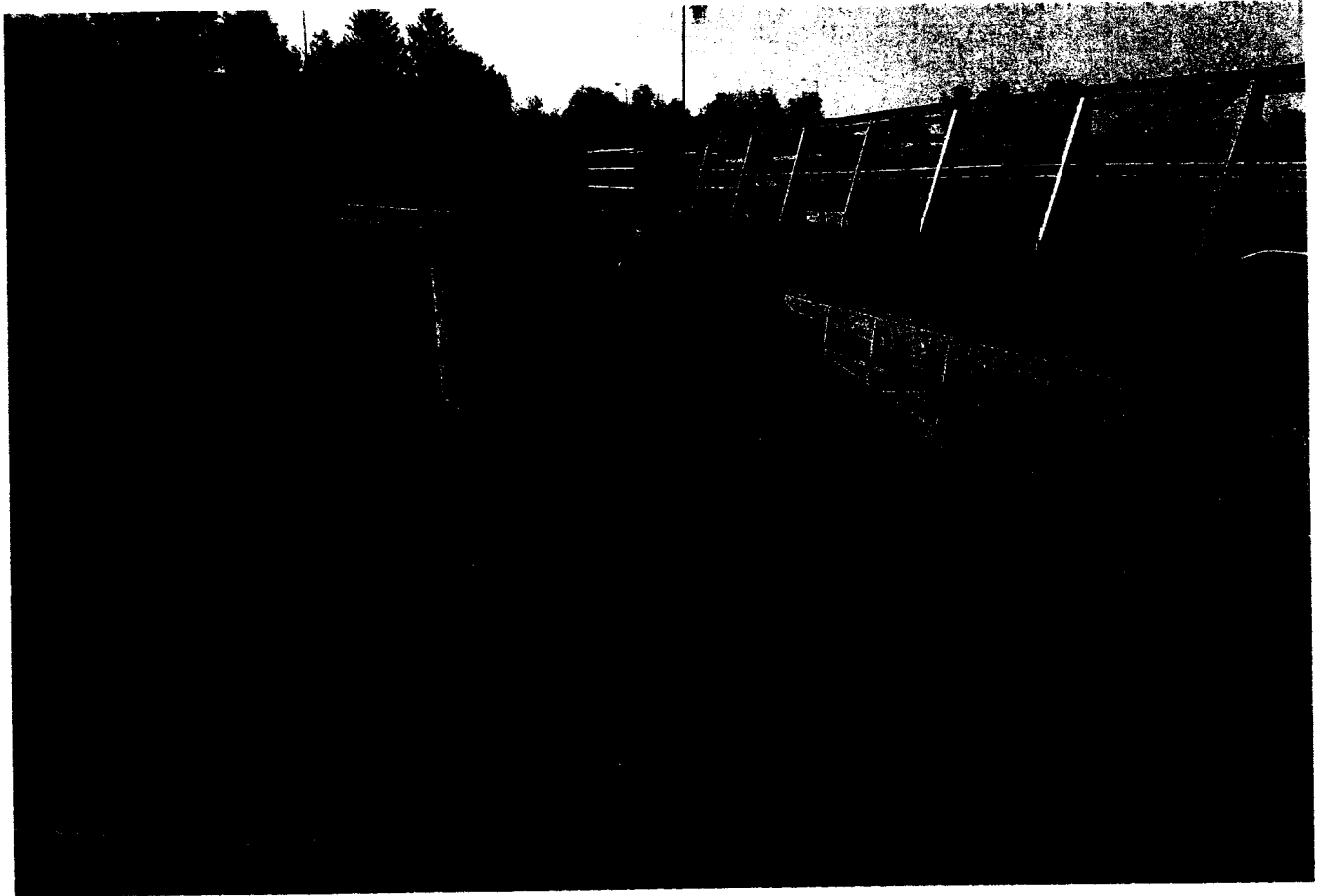
Scope of Work: Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection

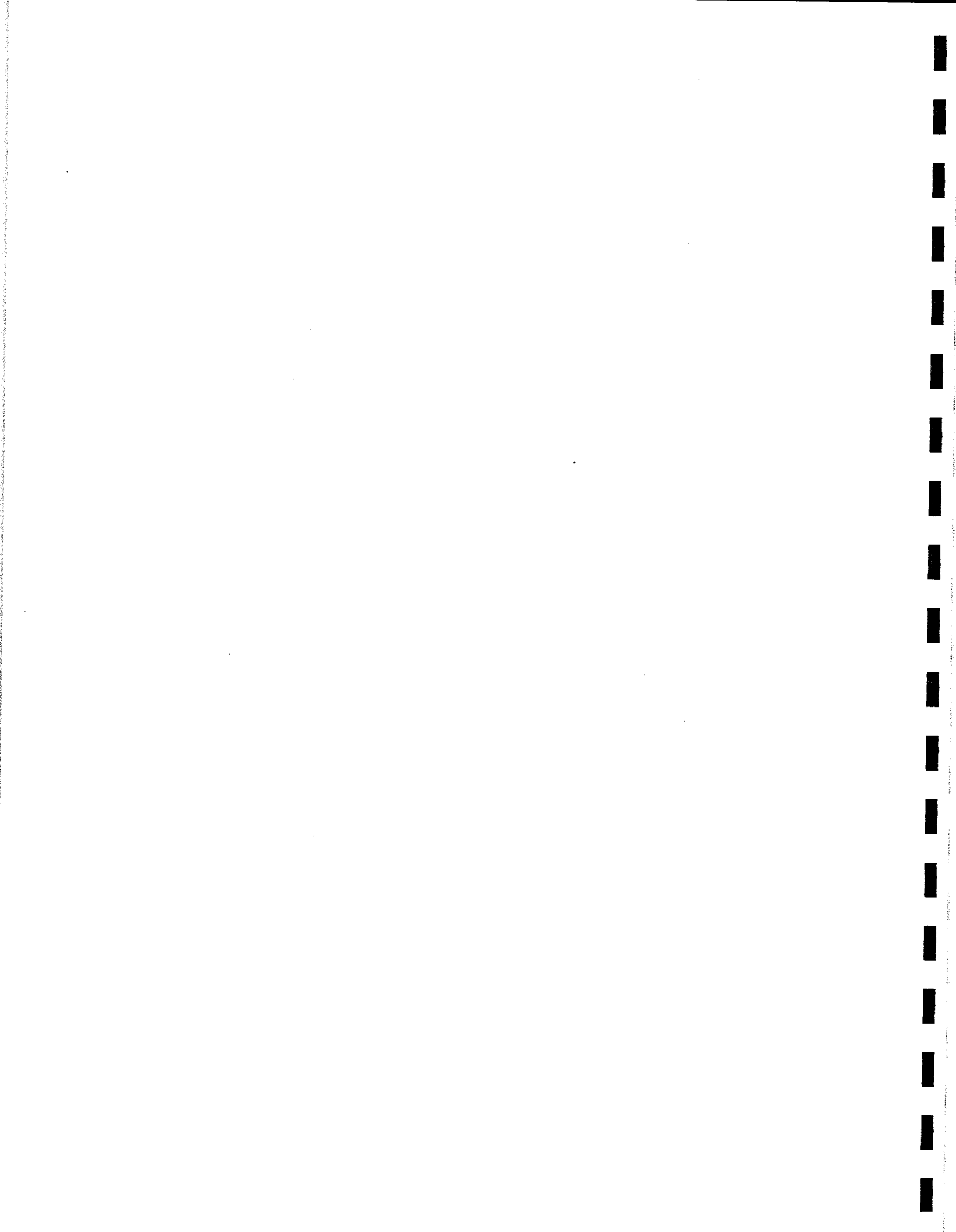
A.	Task 1: Collection of Information: Evaluation of Damage	Cost Task 1: <u>\$17,170</u>					
	Exploratory Demolition Clarifier #8	\$15,000.00					
	Exploratory Demolition Clarifier #7	\$40,000.00					
B.	Task 2: Development of repair Concepts, Schedule, Phasing and Cost	Cost Task 2: <u>\$9,450</u>					
C.	Task 3: Detailed Design	Cost Task 3: <u>\$42,190</u>					
D.	Task 4: Bidding Services	Cost Task 4: <u>\$9,925</u>					
E.	Task 5: Construction Administration Services	Cost Task 5: <u>\$46,100</u>					
	Details for Task 5.5 - The total cost should be included in Cost Task 5. Please provide the following breakdown. Estimated Weekly Inspection Hrs/Estimated Total Inspection Hrs/Hourly Rate. <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; border-bottom: 1px solid black;">20</td> <td style="text-align: center; border-bottom: 1px solid black;">/</td> <td style="text-align: center; border-bottom: 1px solid black;">520</td> <td style="text-align: center; border-bottom: 1px solid black;">/</td> <td style="text-align: center; border-bottom: 1px solid black;">\$55.58</td> </tr> </table>		20	/	520	/	\$55.58
20	/	520	/	\$55.58			
	Section 2 Total Cost:	\$179,835					

Key Assumptions:

- *Our design cost is based on a total redesign of the 8-inch membrane slab and associated rock anchors. We estimate this effort at 10 drawings total.*
- *We do not anticipate any remedial work associated with the perimeter wall, trough and thickened base slab. This assumption will be confirmed by visual inspection and survey.*
- *We have not included any cost for evaluation or total replacement of the clarifier equipment. It is assumed that the existing clarifier mechanism will be temporarily removed and reinstalled as required to perform the repair work.*
- *Our cost does assume complete re-grouting of the clarifier base slab, swept-in by the clarifier mechanism.*
- *No cost has been included for scoping and evaluation of existing piping below the clarifiers.*

Estimated Schedule



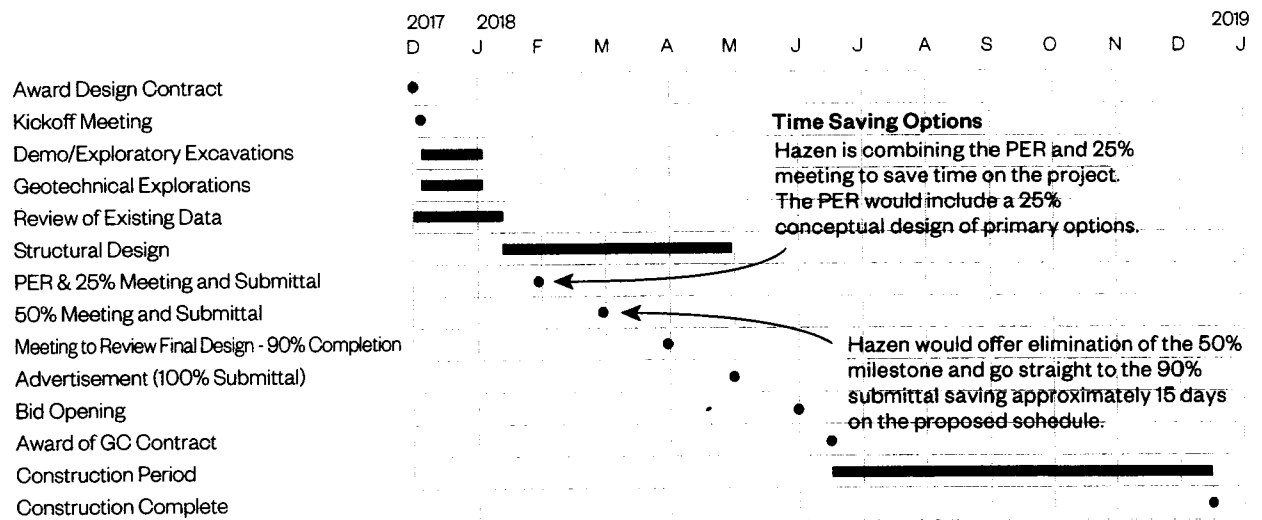


Estimated Schedule

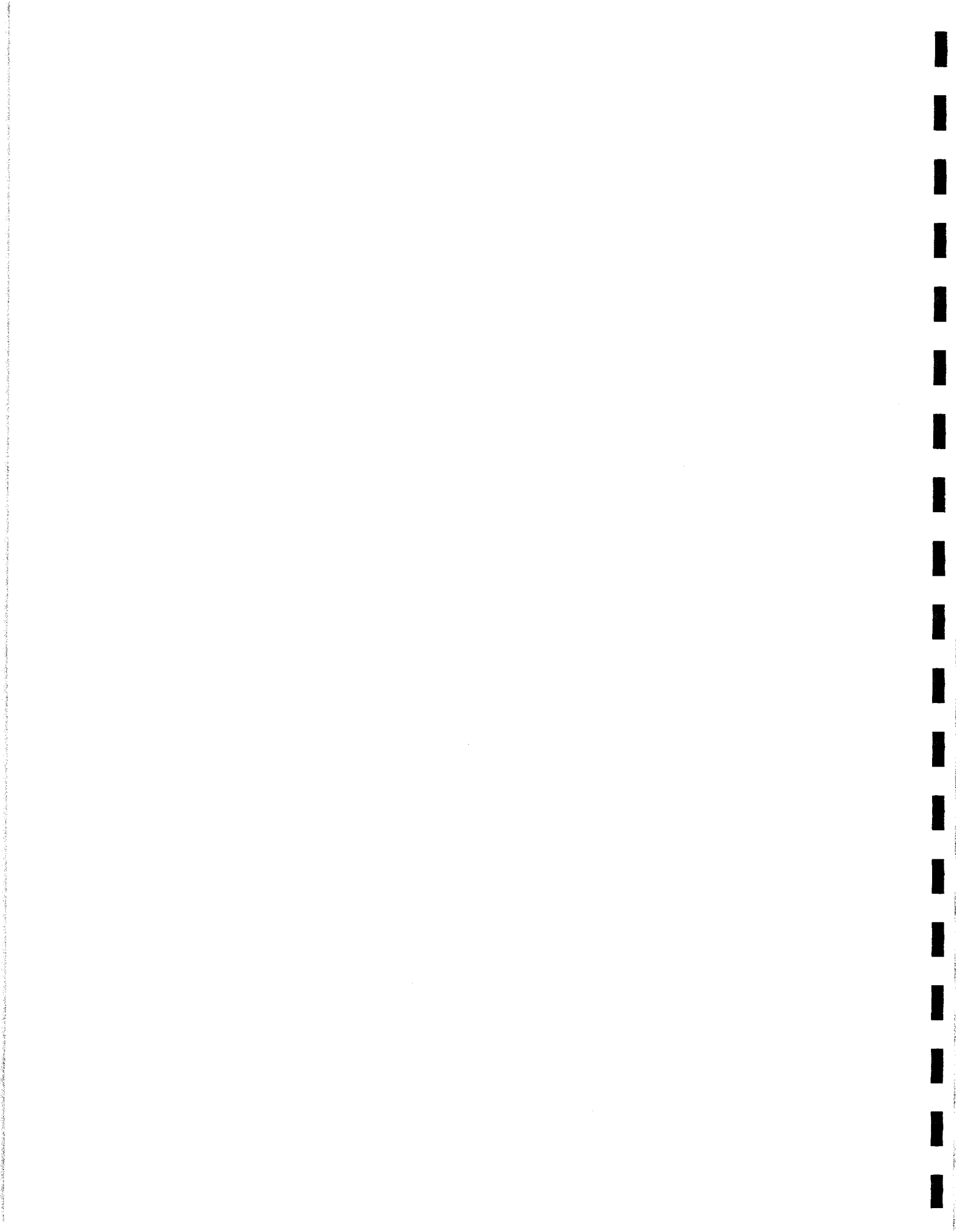
Hazen has noted the importance of the project schedule as outlined in the RFP. Consequently, we intend to complete the project within the proposed schedule. In fact, Hazen has identified several time-saving options.

The RFP indicated design deliverables and corresponding progress meetings at Preliminary Engineering Report (PER), 25% Design, 50% Design, 90% Design, and Final Design completion. Hazen's schedule below indicates compliance with all these deliverables. However, as a time-saving measure, Hazen is proposing to combine the PER and the 25% Design into one common submittal. Therefore, the PER would include the 25% Design documents.

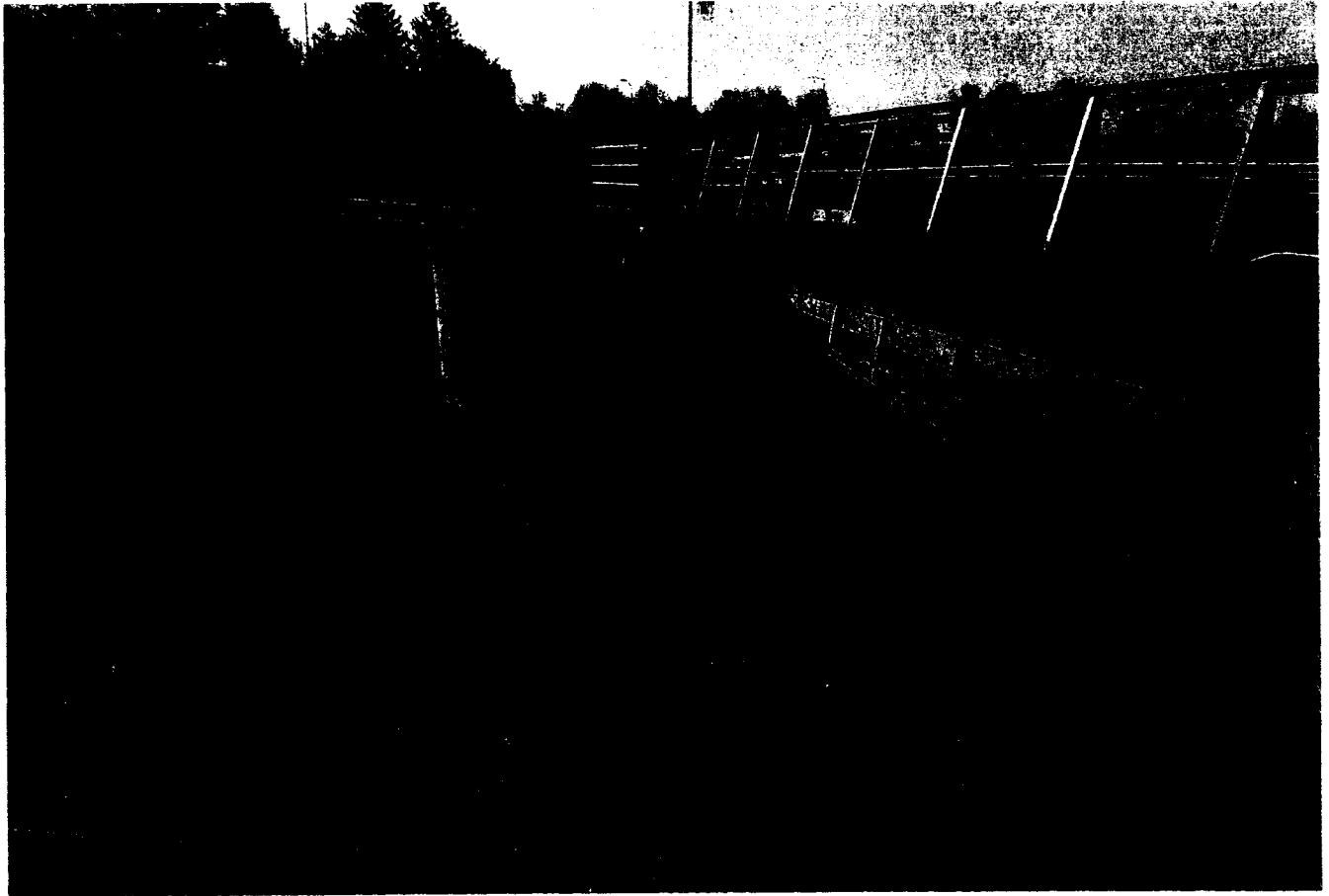
Additionally, Hazen would also recommend elimination of the 50% Design submittal - going straight to the 90% Design milestone. We feel that with DWQ's "buy-off" of the PER/25% Design submittal, this will set the direction for the Final Design documents. Elimination of the 50% Design submittal could potentially shave approximately 1/2 month off the schedule.

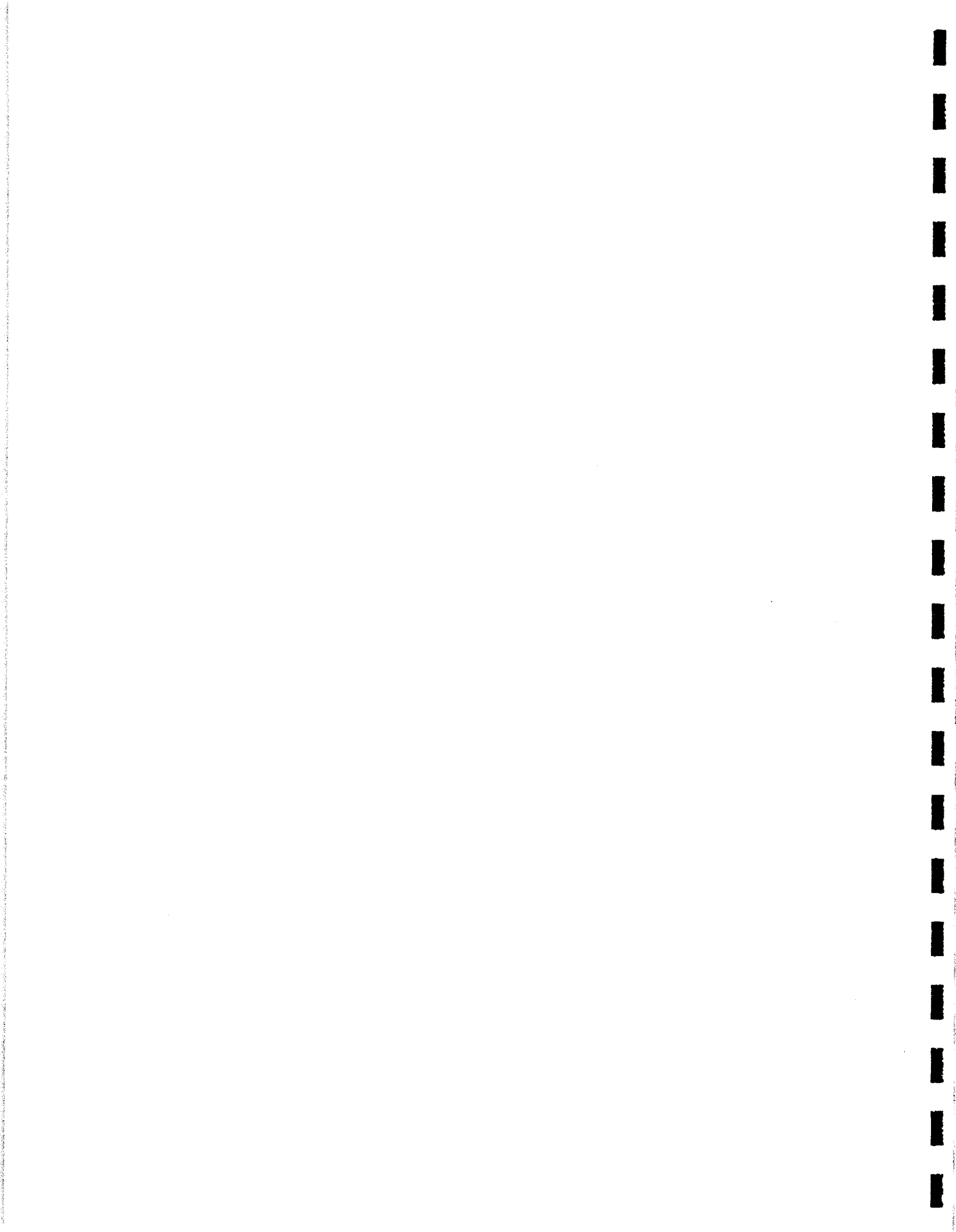


1005-688



Project Team

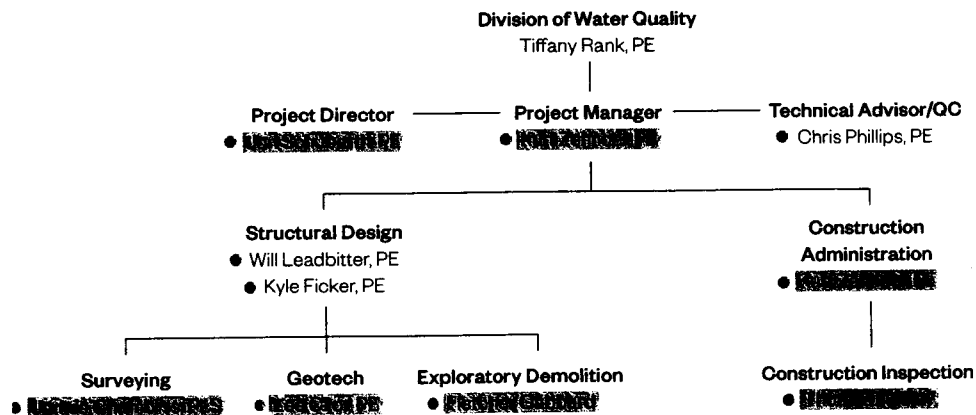
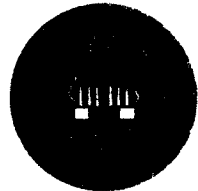




Project Team

Hazen is proposing an experienced local staff that you know and trust, coupled with regional structural experts that are unmatched in their field.

- Hazen and Sawyer
- Integrated Engineering (DBE)
- Free Contracting, Inc. (DBE)
- Geotechnology, Inc.
- Indicates local staff



Hazen’s project team will be led by **Kurt Zehnder**. Kurt has over 14 years of experience in planning and design of wastewater projects including treatment plants, pump stations, and collection systems. Kurt will have overall responsibility for the successful planning, monitoring, execution, and controlling of this project. **Jon Schubarth** will serve as the Project Director. Jon’s role will be to oversee the project’s management, ensure adequate quality control review, and ensure Hazen’s team has all the resources necessary to successfully complete this project.

Detailed resumes for all team members are included beginning on page 3 of this section.

Hazen’s team consists of structural engineering experts with extensive investigative and design experience. The structural team will be led by **Will Leadbitter**. Will has over 20 years of experience in structural design, condition assessment, retrofitting of existing structures, and concrete repair. He will have overall responsibility for the structural investigation, rehabilitation recommendations, and detailed design associated with this project. Support for Will shall be provided by **Kyle Ficker** and QC review by **Chris Phillips**.

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Hazen will be supported by several subconsultants/subcontractors:



Integrated Engineering (MBE) will be assisting Hazen with a surveying and construction inspection services. Integrated Engineering will be surveying Final Clarifiers #7 and #8 to ensure the outer portions of the clarifiers were not raised when the clarifiers failed as well as surveying in the final weir elevations to ensure proper operation after construction. They are also providing a resident project representative to oversee repair work during construction. Integrated Engineering's subconsultant fees are included in Task 1 and Task 5, respectively.



Geotechnology, Inc. will be assisting Hazen with the geotechnical investigations necessary to better understand the subsurface conditions in order to provide a sound structural design. Geotechnology's subconsultant fees are included in Task 1.



Free Contracting, Inc. (WBE) will be assisting Hazen in the investigation phase for exploratory demolition for each clarifier. Free Contracting's subcontracting fees are listed as allowances for each clarifier and will only be utilized to the extent required for adequate exploratory investigation.

Hazen's team has the experience, technical expertise, local knowledge of the project, and availability to successfully deliver the DWQ project efficiently and effectively.

Hazen Key Team Member Project Capacity

Team Member	Office Location	Role on WHWWTP	Date of Availability	Anticipated % Time Dedicated to WHWWTP	Overall Capacity
Kurt Zehnder, PE	Lexington	Project Manager	12/1/2017	15%	25%
Jon Schubarth, PE	Lexington	Project Director	12/1/2017	5%	10%
Chris Phillips, PE	Raleigh	Technical Advisor/QC	1/15/2018	5%	15%
Will Leadbitter, PE	Cincinnati	Structural Design	12/1/2017	35%	40%
Kyle Ficker, PE	Cincinnati	Structural Design	12/1/2017	40%	50%
James Chambliss, PLS	Lexington	Surveying	12/1/2017	10%	50%
Lee Czor, PE	Lexington	Geotech	12/1/2017	10%	50%
Fletcher Gabbard	Lexington	Exploratory Demolition	12/1/2017	25%	45%
Thomas Figeley	Lexington	Construction Inspection	6/1/2018	50%	50%

1005-688



Kurt Zehnder, PE

Senior Principal Engineer

Mr. Zehnder has over 14 years of wastewater systems design experience including, but not limited to, pump stations, municipal collection systems, clarifiers, and aeration systems. He has provided detailed construction administration and project management services on several sanitary systems and wastewater treatment plant projects in Kentucky including projects for Lexington-Fayette Urban County Government.

Education

BSCE, University of Kentucky,
2003

Certification/License

Professional Engineer: KY, OH, IN

Areas of Expertise

- Wastewater pumping station planning and design
- Gravity collection systems and force mains planning and design
- Water transmission and distribution systems
- Ground and elevated water tank design

Experience

- 14 total years
- <1 year with Hazen

Professional Activities

KY/TN American Water Works
Association

KY/TN Water Environment
Association

Kentucky Society for Professional
Engineers

Town Branch Wet Weather Flow Storage and Pumping Facilities, Lexington, KY

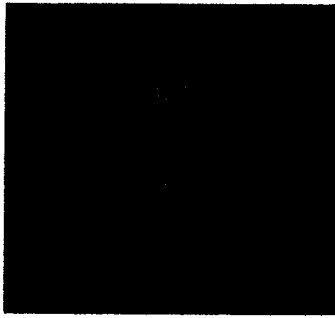
Project manager - Phase 1 of multi-phase wet weather storage facility adjacent to LFUCG Town Branch WWTP. Includes 22 MG above grade, pre-stressed concrete structure with overflow weir box and a four-plex, 56 mgd submersible pumping station to convey peak wet weather flows to tank. Project is a deliverable of LFUCG's consent decree. Significant funding is provided by KIA Clean Water SRF.

Wastewater Treatment Plant Upgrade, Corbin, KY

Project manager - Major items of work include expansion/upgrade of 9.0 mgd existing pump station no. 1 (main pumping station adjacent to plant); improvements to existing pre-treatment building (screening and grit removal); new 2.0 MG sideline wet weather flow equalization, 2.0 mgd wet weather pump station; new 100' diameter circular final clarifier, new RAS/WAS pump station and new UV disinfection facilities.

Wastewater Treatment Plant Upgrade and Improvements, Liberty, KY

Project manager - Upgrades to the 22-year-old WWTP include construction of a new 1.5 MG wet weather flow equalization basin; a duplex submersible wet weather pump station, improvements control instrumentation, and replacement of the following equipment: generator, new raw sewage flow meter; new grit removal equipment; return sludge pump and controls; waste sludge pumps and controls; secondary clarifier sludge collection equipment; new UV disinfection equipment (replaces existing chlorine disinfection and de-chlorination equipment); aerobic digester blower equipment.



Jon Schubarth, PE

Senior Associate

Mr. Schubarth has over 23 years of experience in both private sector consulting and public sector utility engineering and management. His experience includes design and construction services for projects including water and wastewater systems, capital planning, permitting, pump stations, and treatment plants.

Education

MSEnvE, Georgia Institute of Technology, 1993

BSE, Georgia Institute of Technology, 1992

Certification/License

Professional Engineer: KY

Areas of Expertise

- Utility management and operation
- Collection and distribution Systems planning and design
- Treatment plant Planning and design
- Booster pump station design

Experience

- 23 total years
- 6 years with Hazen

Professional Activities

Water Environment Federation

American Water Works Association

Kentucky Rural Water Association

Derek R. Guthrie Water Quality Treatment Center (DRGWQTC) Secondary Clarifier Mechanism Replacement, Louisville MSD, Louisville, KY

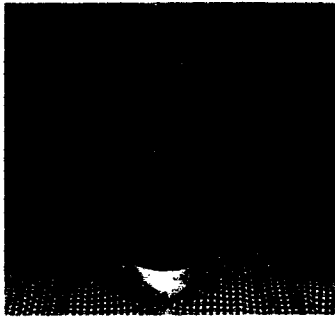
Project manager for the design of mechanism replacement in three 120-foot diameter secondary clarifiers at the 30 mgd DRGWQTC. Included replacing the multiple suction pipe ("organ pipe") sludge removal mechanism with a unitube suction header ("Tow-Bro) and installing new drive units, scum removal skimmers/troughs, walkways, and drive platforms in all three secondary clarifiers.

DRGWQTC RAS Pump and VFD Replacement, Louisville MSD, Louisville, KY

Project manager for the design of replacing two of the four RAS pumps and installing new VFDs for all four pumps as the final component to rerating the permitted plant capacity of the DRGWQTC from 30 mgd to 45 mgd. The improvements included replacing two 8 mgd dry pit centrifugal pumps with 20.3 mgd pumps, installing new seal water control systems for all four RAS pumps, installing new VFDs for all four RAS pumps, modifying the electrical room to make room for the new VFDs, and improving the HVAC equipment in the electrical room.

Lower Howards Creek WWTP Contract Administration, Winchester Municipal Utilities, Winchester, KY

Project manager for the contract administration and startup of a new 2.0 mgd oxidation ditch WWTP, including preliminary treatment, influent pumping, biological treatment, clarification, UV disinfection, and solids processing.



Christopher Phillips, PE

Associate Vice President

Mr. Phillips has performed many structural condition assessments and evaluations for various environmental and building structures at water and wastewater treatment plants, dams, pump stations, and spillways.

Education

MOE, North Carolina State University, 1988

BSCE, North Carolina State University, 1985

Certification/License

Professional Engineer: NC, VA, NY, NJ, SC, OH, MD, DC

Areas of Expertise

- Structural design, analysis and construction of commercial, industrial, and sanitary structures
- Structural condition assessments of environmental and building structures
- Behavior and composition of hydraulic cement concrete
- Personnel management of corporate staff of structural engineers and design technicians

Experience

- 33 total years
- 29 years with Hazen

Professional Activities

American Society of Civil Engineers

American Concrete Institute

National Society of Professional Engineers

Chi Epsilon

Concrete Reinforcing Steel Institute

International Concrete Repair Institute

Wastewater Treatment Experience

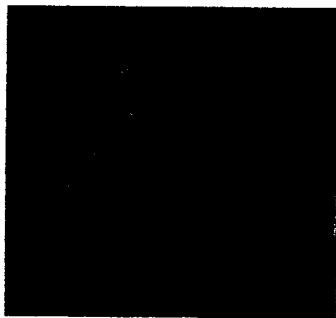
Mr. Phillips has participated in the various phases of design and construction on numerous wastewater treatment plant projects including:

- T.Z. Osborne WWTP Expansions, Two projects, years apart: 30 and 40 mgd, Greensboro, NC
- South Durham WRF Upgrade and Expansion(20 mgd), Durham, NC
- Neuse River WWTP Upgrades and Expansions, (Multiple projects, over many years: 60 and 75 mgd), Raleigh, NC
- Roanoke Regional WPCP, (Multiple projects, over several years) Roanoke, VA
- Moores Creek WWTP Upgrades, Rivanna Water and Sewer Authority, Charlottesville, VA
- Plum Island WPCP Upgrades, Charleston Public Works, Charleston, SC

Structural Condition Assessments

Mr Phillips has extensive experience in structural condition assessments for environmental structures including clarifiers, dams, spillways, pump stations, and buildings including:

- Irwin Creek WWTP, CMU: Final and Secondary Clarifiers Charlotte, NC
- Sugar Creek WWTP, CMU: Final & Secondary Clarifiers Charlotte, NC
- North Durham WRF: Aerobic Digesters, Durham, NC
- Ni River WTP, Spotsylvania County, VA
- Clarksville WWTP Flood-Damaged Structures, Clarksville, TN
- Cross Creek WWTP, Primary and Secondary Clarifiers, Public Works Commission, Fayetteville, NC
- Sod Run WWTP: Multiple Structures, Perryman, MD
- Noman Cole WPCP: Multiple Structures, Fairfax County, VA



William G. Leadbitter, PE

Associate

Mr. Leadbitter is the lead structural engineer for the Hazen's midwest region. He has significant experience in structural design, condition assessment, retrofit of existing structures and concrete repair. Within the last five years he has been the structural lead on projects involving over twenty-five new and existing clarifiers.

Education

BSCE, North Carolina State University, 1997

Certification/License

Professional Engineer: MA, NH, NC, IN, KY, MD, MN, MO, OH, PA, TN, VA

Areas of Expertise

- Structural design related to water and wastewater treatment facilities, collection systems, bridges and architectural structures
- Structural condition assessment of existing infrastructure
- Construction administration and field inspection
- Concrete repair and rehabilitation
- Structural Design Team Management

Experience

- 21 total years
- 20 years with Hazen

Professional Activities

Chi Epsilon - Civil Engineering Honor Society

American Concrete Institute

Structural Engineers Association of Ohio

American Institute of Steel Construction

Lower Howards Creek Inflow Pump Station and WWTP, Winchester, KY

Structural engineer of record for design and construction of the facility. The project involves more than a dozen structures as part of a new 10 mgd plant, including three 70-foot diameter final clarifiers.

Derek R. Guthrie Water Quality Treatment Center Secondary Clarifier Mechanism Replacement, Louisville MSD, Louisville, KY

Structural lead for rehabilitation of three 130-foot diameter secondary clarifiers. Repairs included removal and replacement of swept-in grout topping, pressure relief valve repair and expansion joint repair.

LeSourdsville WRF Phase 2 Improvements, Butler County Water and Sewer Department, Butler County, OH

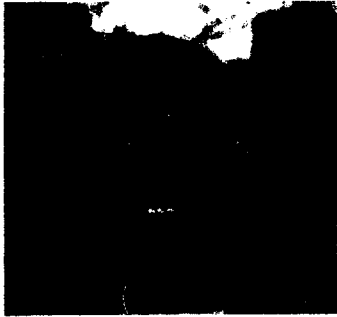
Performed structural design for the foundation of a new 120-foot diameter final clarifier. Due to the presence of poor soils and high groundwater from the nearby Little Miami River, 113 24-inch diameter drilled piers were designed and installed to support tank and prevent flotation.

WRF Facilities Final Clarifier Improvements, Dayton, OH

Lead structural engineer for design modifications and structural repairs of eight 160-foot diameter final clarifiers. Work includes re-grouting of swept-in grout topping and pressure relief valve replacement.

WWTP Improvements, Clarksville, TN

Structural engineer of record for a major upgrade that included four new 140-foot diameter final clarifiers. Multiple options were evaluated during the design due to high groundwater. At locations where shallow bedrock was encountered at FC1 and FC2, 278 rock anchors were installed under each tank to prevent uplift. Pressure relief valves and a thickened base slab prevent buoyancy of FC3 and FC4.



Kyle A. Ficker, PE

Principal Engineer

Mr. Ficker is a structural engineer who has experience with design, construction, assessment and retrofitting of infrastructure at water and wastewater facilities. His experience includes new design, repair, and rehabilitation of reinforced concrete, steel, and reinforced masonry structures.

Education

BSCE, University of Cincinnati,
2012

MSCE, University of Cincinnati,
2014

Certification/License

Professional Engineer: OH, KY,
TN

Areas of Expertise

- Design and layout of reinforced Concrete and steel structures using governing codes and standards
- AutoCAD design and drafting
- Structural analysis and calculations
- Shop drawing review
- Site inspections

Experience

- 5 total years
- 3 years with Hazen

Professional Activities

American Society of Civil
Engineers

Structural Engineers Association
of Ohio

American Institute of Steel
Construction

Concrete Reinforcing Steel
Institute

WRF Facilities Final Clarifier Improvements, Dayton, OH

Design structural engineer for the design modifications and structural repairs of eight final clarifiers and sludge pumping station building. Responsibilities included performing structural inspections and assessments, developing technical drawings and specifications, and performing construction administration duties. Duties included shop drawing submittal reviews, RFI reviews, and field inspections of structures.

Jackson Pike WWTP Biosolids Land Application Improvements, Columbus, OH

Performed structural inspections and assessments of four existing digester tanks. Developed technical memorandums describing the finding of the inspections and recommended modifications and repairs for extended life of the tanks. Also responsible for the structural design and assessment of the new truck loadout stations and modifications to existing digester tanks, control house and sludge storage tanks.

Clarksville WWTP Improvements, Clarksville, TN

Performed construction administration including shop drawing submittal reviews and field inspections associated with the project. Structures reviewed include the aeration tanks, RAS-WAS pump station, final clarifiers, chlorine contact basin, chemical building, maintenance and sludge dewatering building, and miscellaneous yard structures.

Olentangy WTP Expansion, Delaware, OH

Structural engineer - Included a 118' diameter prestressed clearwell, a concrete moment frame addition to the existing filter building, a concrete recarbonation basin expansion, a concrete softening basin, modifications to existing preox/floc/sed basins, and a full structural analysis of an existing concrete moment frame with increased lime storage capacity. His responsibilities included performing all structural calculations and analysis for the new and existing structures, performing condition assessments of existing structures, and developing specifications. He will also perform the construction administration for this project.

James M. Chambliss, PLS

Over 37 years of experience in the land surveying and construction industries specific experience in the oil and natural gas industry. Experienced in route reconnaissance, establishment of project control networks, road, railroad & stream crossing profiles, preliminary route surveying, underground utility locating, identifying high consequence areas, construction staking and pipe line as-built surveying. Well versed in all aspects of conventional and GNSS surveying methods and equipment. Project experience includes work on gas and liquid pipelines, gathering systems, compression facilities, metering and regulation facilities.

EXPERIENCE

Wellington Storm Water Basin A (LFUCG) - Fayette County, KY - Survey Project Manager on this project and in charge of the topographic survey of the detention basin in Shillito Park.

Hazen & Sawyer-Glenns Creek Sanitary Sewer - KY - Survey Project Manager on this project and in charge of the Deed/plat research for property owners & existing easements.

New Circle Road Waterline Replacement (KAWC) - Fayette County, KY - Survey Project Manager on this project and in charge of Right of Way and Easement research to avoid having to purchase Right of Way to replace the waterline.

Louisville MSD Lexington & Payne CSO - KY - Survey Project Manager in charge of developing sewer easement exhibits and descriptions.

Coldstream Park Cane Run Creek Restoration - Fayette, KY - Survey Project Manager for staking the construction limits and setting bench marks on 3500' of Cane Run Creek.

Kentucky American Water - Scott County, KY - Survey Project Manager for the topographic survey of Kentucky American Water facilities along 2 miles of I-75 in Scott County at the Toyota Plant.

Richmond Road Plant Sedimentation Basin - Fayette, KY - Survey Project Manager for preparing the as-built survey of Kentucky American Water sedimentation basin.

Park Avenue/ UK Water Main Replacement - Fayette, KY - Survey Project Manager for the topographic survey of Park Avenue beginning at Woodland Avenue extending to the University of Kentucky property. Deed/plat research and develop easement exhibits and descriptions.

Greenbriar Avenue Survey - KY - Survey Project Manager and developed easement exhibits and descriptions.

Sanitary Sewer As-Builts - Fayette County, KY - Survey Project Manager for the filed surveys on sanitary sewer rehab construction.

Meadows Northland Arlington Phases 5D, 5E, and 5F - Fayette County, KY - Survey Project Manager for the public acquisition plat for Morgan & Bryan Avenues.

Fort Knox Water ISDC Project Fort Knox, KY - Survey Project Manager for the field work on various water tower site topographic surveys.

Kentucky American Water - Fayette County, KY - Survey Project Manager on this project and in charge of the Final Record Plat and Deed Preparation. He also developed easement exhibits & descriptions.

Lee Czor, P.E.

Branch Manager - Lexington

Experience: 21 years

Education: M.S., Civil Engineering, University of Tennessee
B.S., Civil Engineering, University of Tennessee

Registration: Professional Engineer: KY, OH, IN

Mr. Czor has experience in civil and geotechnical engineering projects which include commercial and industrial buildings, water and wastewater treatment plants, and extensive transportation infrastructure projects (including roadway relocations, widenings, and roadway bridges over the Ohio, Tennessee, and Cumberland Rivers). Mr. Czor is responsible for supervision of field explorations, developing subsurface material parameters, performing engineering analyses, and developing engineering reports (including construction recommendations and specifications). Mr. Czor mentors junior staff and provides peer review for current projects.

- *Cannelton Hydroelectric Project, Hawesville, Kentucky* - Senior Project Manager for construction materials testing for construction of a new hydroelectric plant on the Ohio River at Cannelton Dam. Geotechnology had an on-site testing laboratory with three full time engineering technicians, and additional support technicians and engineers.
- *CoMPSUPCEN Facility, Bluegrass Station, Kentucky* - Senior Project Manager. Services were provided for the design and construction of an approximately 75,000 sf DoD structure at the Bluegrass Station facility in Fayette County, Kentucky. The field work consisted of six test borings and 26 rock-line soundings. Mr. Czor was responsible for developing and supervising the field exploration as well as

laboratory testing, engineering analyses, and preparation of the geotechnical engineering report. Mr. Czor also supervised the construction materials testing during the construction phase of the project.

- *Fariston 30,000 sf and 12,000 sf Structures, Laurel County, Kentucky* - Senior Project Manager. The London/Laurel County Industrial Development Authority retained Geotechnology to perform the geotechnical exploration for these new industrial structures near London, Kentucky at the Fariston Industrial Park. Mr. Czor was the geotechnical engineer of record for the explorations, which included 11 test borings. Mr. Czor was responsible for oversight of field testing, laboratory testing, engineering analyses, and preparation of the geotechnical exploration report; which included recommendations for design and construction of the facilities. Geotechnology, Inc. was also retained to perform the construction materials testing at the site during construction.

QUALITY

INTEGRITY

RESPONSIVENESS

PARTNERSHIP

OPPORTUNITY

SAFETY

St. Louis, MO | Erlanger, KY | Memphis, TN

Overland Park, KS | Cincinnati, OH | Fairview Heights, IL | Lexington, KY

Dayton, OH | Oxford, MS | Jonesboro, AR



FROM THE GROUND UP

geotechnology.com

FLETCHER W. GABBARD

521 Reed Lane
Lexington, KY 40503

Cell: 859-621-9833
Email: fletcher@freecontracting.com

CONTRACTING PROFESSIONAL

GENERAL CONTRACTING | CONSTRUCTION MANAGEMENT | PROJECT PERFORMANCE

Experienced project manager brings 20+ years of expertise to the table in pursuit of a Senior-level Contracting position. My ability to develop and implement feasible timelines and budgets, along with my ability to effectively lead cross-functional teams, has led to my career progression. Proven track record of success in budgeting, coordinating, and directing all planning and building phases of construction projects. I am a strong communicator with effective interpersonal skills, building good rapport with individuals in work process, and providing a sense of commitment and contribution to the overall success of team objectives. Highly motivated self-starter with a tireless drive and energy; leads by example with a sound professional attitude, strong work ethic, and pride in personal performance. I am looking to utilize my background in construction management to take that next step in my career with a respected organization that rewards leadership, performance, and results.

AREAS OF EXPERTISE

- | | | |
|--------------------------------|---------------------------|-----------------------------|
| ▪ Employee Relations | ▪ Recruitment & Selection | ▪ Organizational Management |
| ▪ Scheduling & Time Management | ▪ Project Management | ▪ Training & Development |
| ▪ Bid Negotiation | ▪ Contract Negotiation | ▪ Budget Management |
| ▪ Quality Control | ▪ Logistics Management | ▪ Specification Knowledge |

PROFESSIONAL EXPERIENCE

FREE CONTRACTING, INC., LEXINGTON, KY
PROJECT MANAGER

2012 - PRESENT

- Provide management oversight for all phases of construction projects, including coordinating workers, materials and equipment, and ensuring specifications are being followed and work is proceeding on schedule and within budget.
- Review blueprints, schematics, project and building plans to divide construction activities into logical steps, budgeting time to meet established guidelines.
- Work closely with vendors and suppliers, overseeing supply ordering under strict budgetary constraints while controlling inventory through shortage and loss prevention initiatives.
- Analyze and administer construction contracts, obtaining all necessary permits and licenses adhering to proper codes and standards.

MOORE-GABBARD-BRIDGES GENERAL CONTRACTING, INC., LEXINGTON, KY
OWNER

2005 - 2012

- Purchased Ira Tupts Contracting, Inc. and changed name to Moore-Gabbard-Bridges; 49% stock holder.
 - Provide management oversight for all phases of construction projects, including coordinating workers, materials and equipment, and ensuring specifications are being followed and work is proceeding on schedule and within budget.
 - Review blueprints, schematics, project and building plans to divide construction activities into logical steps, budgeting time to meet established guidelines.
 - Monitor all building systems, including fire-protection, electrical, plumbing, air conditioning and heating specifications, and modifying accordingly given project parameters.
 - Hire, fire, train, supervise, and monitor a staff and subcontractors, overseeing numerous, simultaneous projects and personnel for residential and commercial projects.
 - Work closely with vendors and suppliers, overseeing supply ordering under strict budgetary constraints while controlling inventory through shortage and loss prevention initiatives.
 - Analyze and administer construction contracts, obtaining all necessary permits and licenses adhering to proper codes and standards.
-

Thomas R. Figeley

Tom has over 20 years of applied field experience in field engineering as Assistant Project Engineer, Field Production Engineer, GPS surveying, Trimble robotic total station operations, conventional land surveying & mapping, and construction inspection for gas/oil pipeline location/inspection positions. He has 15 years experience in Field Engineering, Survey Party Chief, Team Leader, Site Supervisor & Project Management positions. Other job duties have included ALTA surveys, boundary surveys and various types of topographic surveys. He also has worked in natural gas pipeline location and condition surveys, static ABGPS & ground static and RTK GPS projects countrywide as well as conventional field to finish horizontal and vertical control surveying projects countrywide.

EXPERIENCE

EA3 Main Trunk (LFUCG) - Lexington, KY - Resident Project Representative responsible for overseeing the construction of 6,665 feet of 30-inch sanitary sewer pipes and manholes being installed to upsize the current system from Russell Cave Road to Newtown Pike in Northeast Lexington. Responsibilities included review of contractor quantities, reconciliation of pay requests, preparation of daily inspection logs, weekly communication reports, erosion control documents, and testing logs.

West Hickman 7 WWS (LFUCG) - Lexington, KY - Resident Project Representative responsible for overseeing the construction of 660 feet of 54-inch steel encasement pipe being bored beneath New Circle Road to serve the new West Hickman 7 Wet Weather Storage (WWS) Tank. Responsibilities included review of contractor quantities, reconciliation of pay requests, preparation of daily inspection logs, weekly communication reports, erosion control documents, and testing logs.

UK Main Trunk A (LFUCG) - Lexington, KY - Resident Project Representative responsible for overseeing the construction of 3,527 feet of 8-inch through 42-inch sanitary sewer pipes and manholes being installed to upsize the current system flowing just northwest of downtown Lexington to the Town Branch WWTP. Responsibilities included review of contractor quantities, reconciliation of pay requests, preparation of daily inspection logs, weekly communication reports, erosion control documents, and testing logs.

Natcher Pkwy @ US231 Interchange (Warren County, KY) - Survey crew responsible for shooting in the control points, storm inlets, and topo.

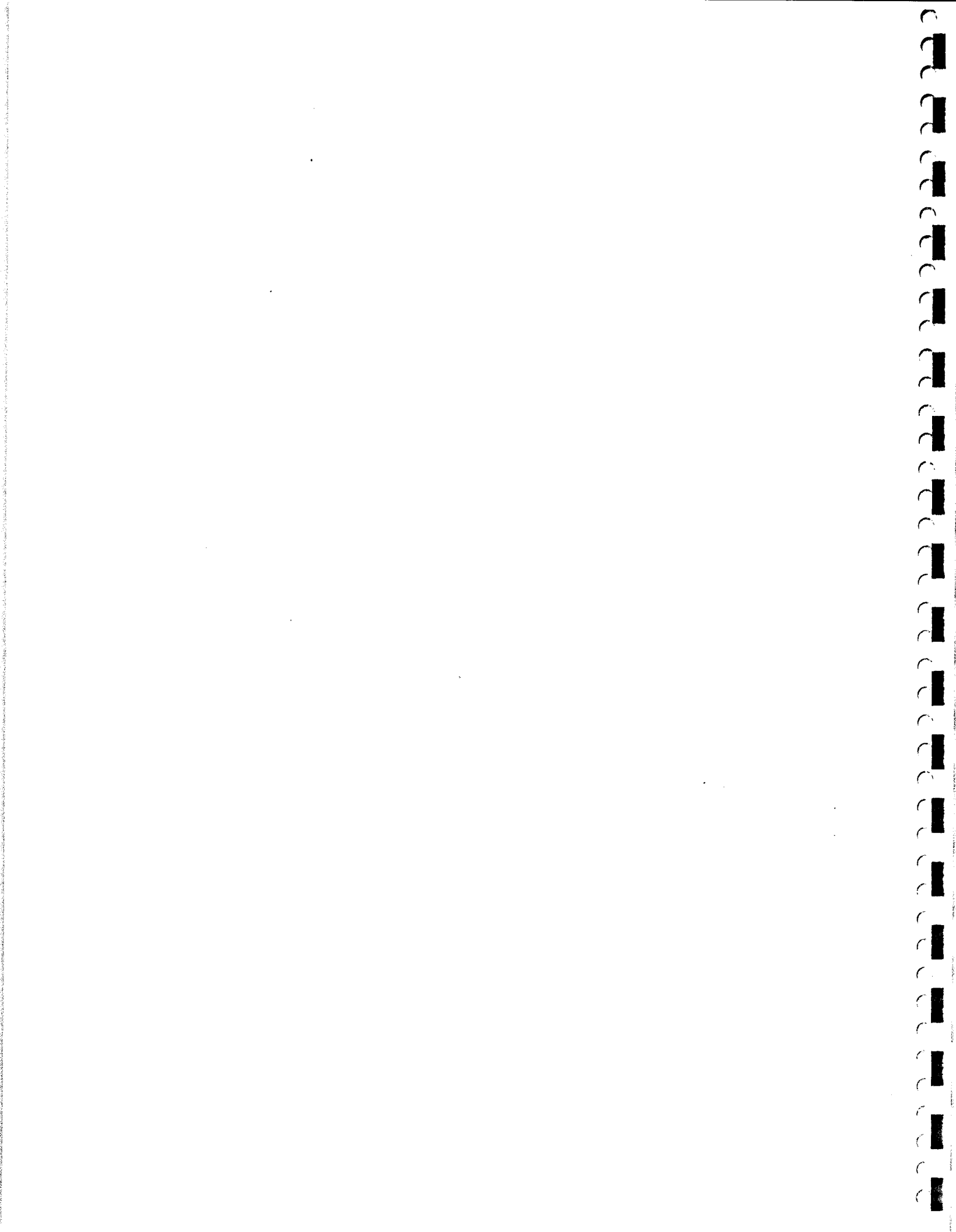
PB-Natcher Pkwy US231 Interchange (Butler County, KY) - Survey crew responsible for shooting in the control points, storm inlets, and topography.

KAWC Park Ave. Water Main Replacement (Fayette County, KY) - Survey crew responsible for shooting in area between the houses and the right-of way.

1099 Contract Survey Crew Party Chief, Abbie Jones Consulting - Lexington, KY - 2013-2016. Field engineering supervision & production.

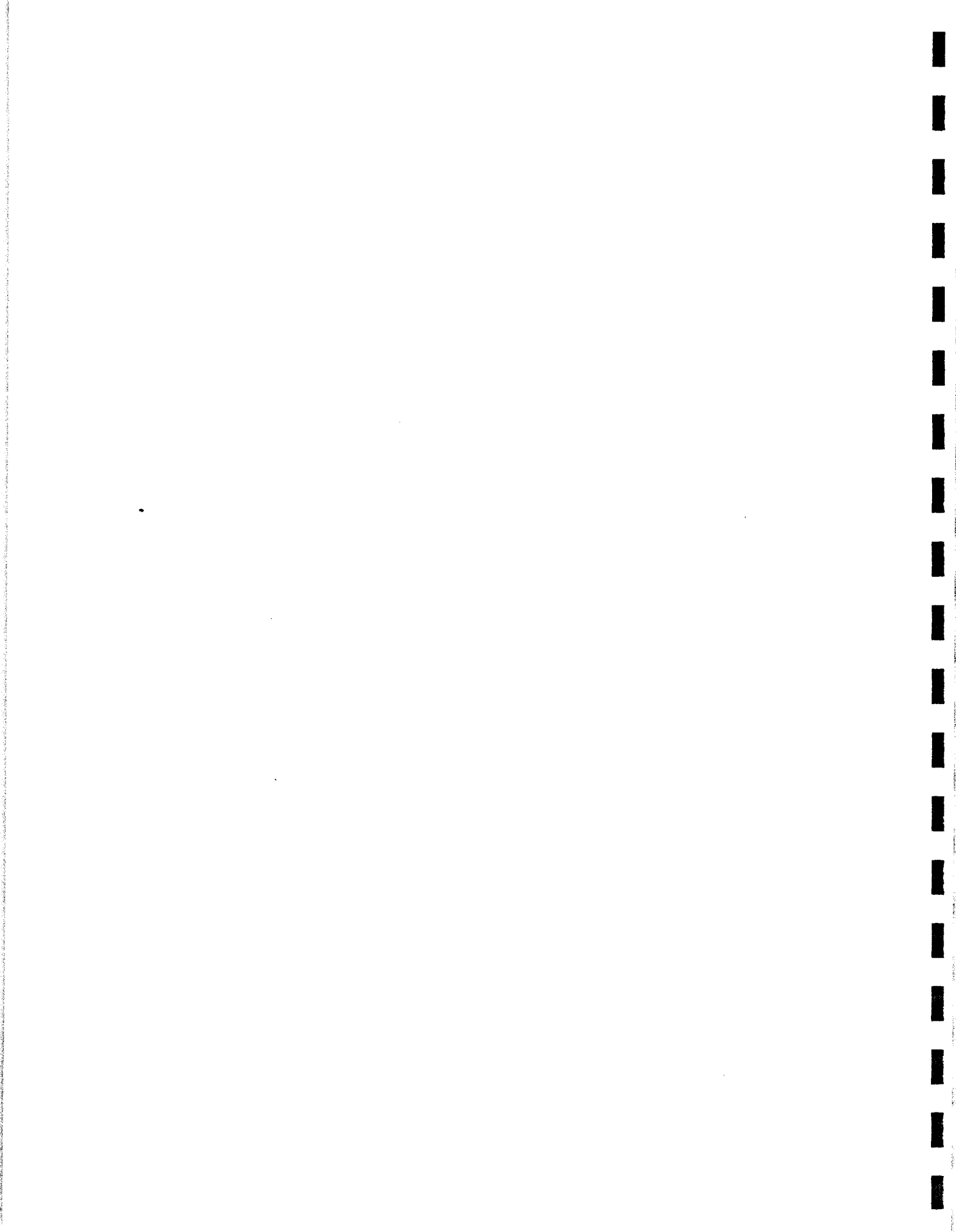
Field Engineering Representative, Business Technical Services - Cincinnati, OH - 2014. Field operations production for natural gas pipeline location, inspection & pipeline integrity management.

Field Operating Engineer, Vescio's Sports Fields - Lexington, KY - 2012. Survey equipment operation, heavy equipment operation and production.



Similar Projects





Similar Projects

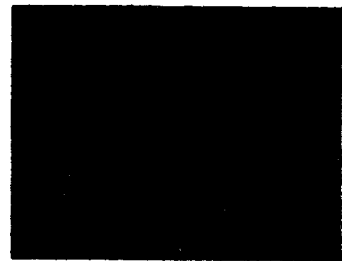
Hazen is a nationally recognized environmental engineering firm, built on a strong foundation of technical and professional excellence. Dedicated entirely to water and wastewater, our focus brings us extraordinary challenges and makes us home to many of the world's most knowledgeable and experienced environmental engineers and scientists.

Hazen has significant relevant experience in the structural design and rehabilitation of final clarifiers. A selection of these projects are provided in this section. The structural project team consisting of **Will Leadbitter**, **Kyle Ficker** and **Chris Phillips** has a total combined experience of over 50 years in the design of wastewater infrastructure. Highlights of our combined experience include the following:

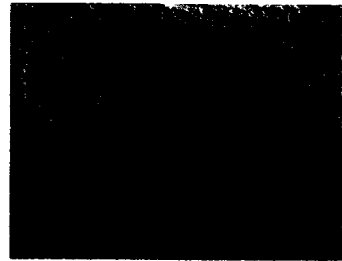
- Multiple projects involving over 25 clarifiers (new and existing) in Kentucky, Tennessee and Ohio within the last 5 years
- Design of clarifier deep foundations including rock anchors, minipiles and large diameter drilled piers for both buoyancy resistance and support of gravity loads
- Global (entire structure) and local (individual elements such as slab, center pier and perimeter wall) buoyancy analysis
- Design of pressure relief valves and drainage systems for buoyancy resistance
- Coordination of geotechnical exploration for design of clarifiers, including determination of groundwater design parameters and rock properties
- Structural inspection and evaluation of existing clarifiers
- Design of structural repairs including swept-in grout topping, concrete spall and crack repair
- Present worth cost analysis of structural repairs.

We believe our experience is directly relevant to the current issues at West Hickman WWTP Final Clarifiers #7 and #8. We will work with LFUCG to select, design and construct the optimal solution and return the clarifiers to permanent working order.

The following summary table focuses solely on clarifier and repair projects completed in the Midwest. Hazen has significant additional national experience that is represented by **Will Leadbitter** and **Chris Phillips**. Both have worked on many clarifier projects in the Mid-Atlantic and Northeast regions.



Rock Anchor Installation

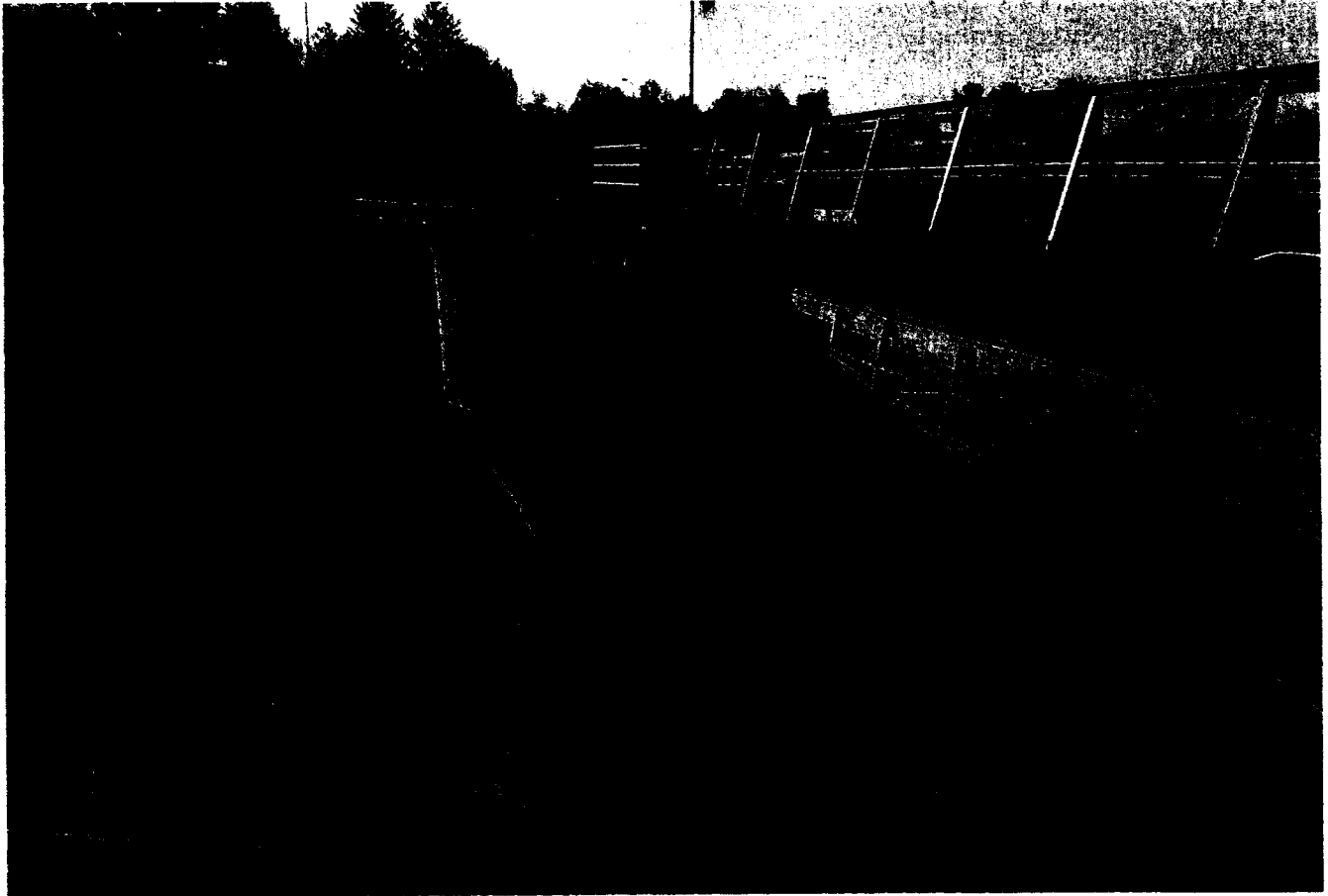


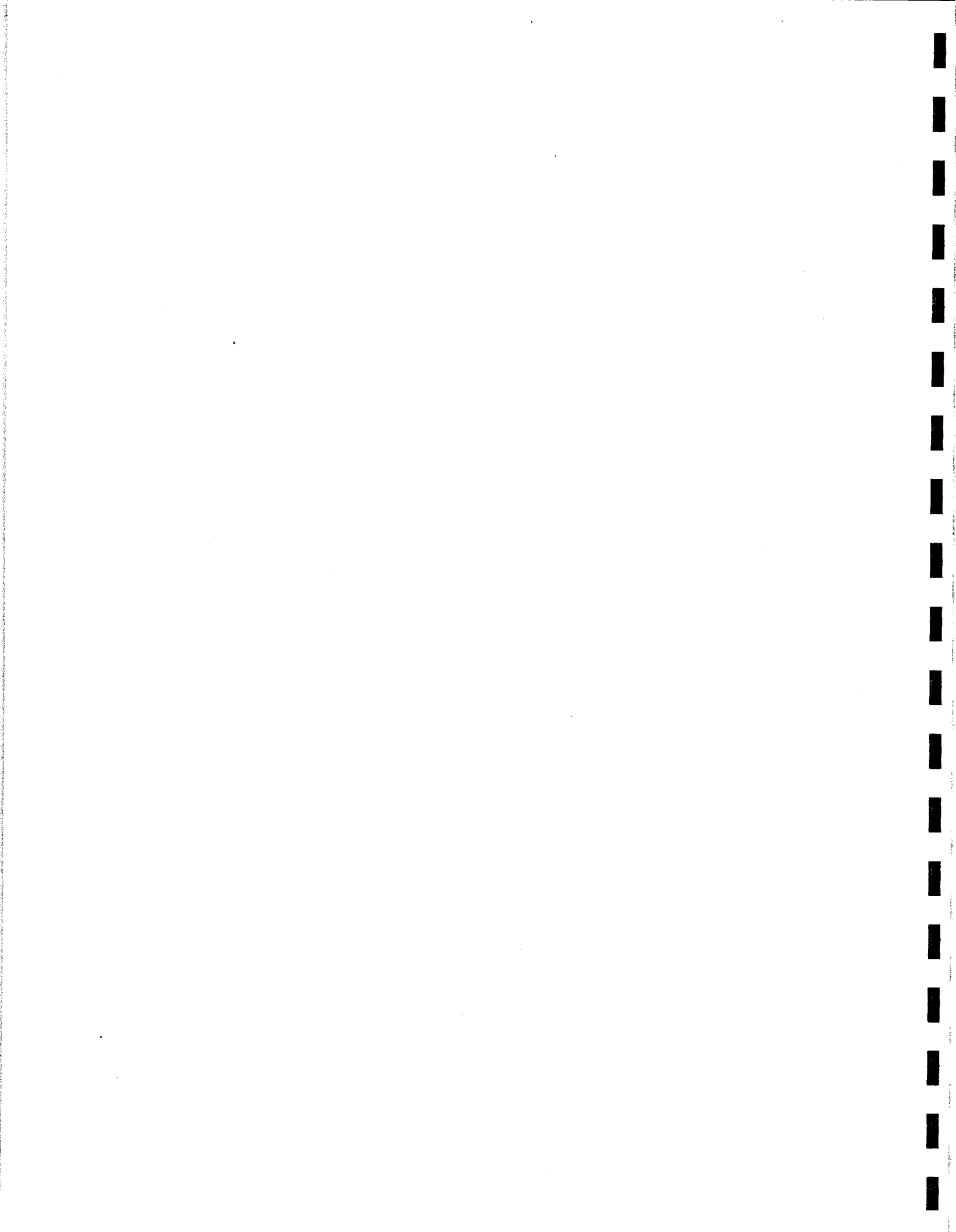
Corroded PRV

Project	Reference	Key Project Scope	Project Relevance
Dayton (OH) Final Clarifiers and RAS Pumping Improvements	Chris Clark Water Reclamation Manager 2800 Guthrie Road Dayton, Ohio 45417 937.333.1832 chris.clark@daytonohio.gov	<ul style="list-style-type: none"> • Eight 160-foot diameter final clarifiers (existing) 	<ul style="list-style-type: none"> • Structural inspection and assessment during design • Repair of pressure relief valves, 23 per clarifier • Select repair and total replacement of swept-in grout topping • Construction inspection
Louisville (KY) MSD Derek R. Guthrie Secondary Clarifier Mechanism Replacement	David Coe Engineer II 700 West Liberty St. Louisville, KY 40203-1911 502.693.1484 david.coe@louisvillemsd.org	<ul style="list-style-type: none"> • Three 130-foot diameter secondary clarifiers (existing) 	<ul style="list-style-type: none"> • Total removal and replacement of existing swept-in grout topping • Repair of pressure relief valve, 8 per clarifier • Repair of bottom slab expansion joints
LeSourdsville (OH) WRF Phase 2 Improvements	Brian M. Custer, PE Field Superintendent Butler County Water & Sewer Department 130 High St., 5th Floor Hamilton, OH 45011 513.887.5552 custerbm@butlercountyohio.org	<ul style="list-style-type: none"> • Four 120-foot diameter final clarifiers (1 new, 3 existing) 	<ul style="list-style-type: none"> • Inspection and repair of existing pressure relief valves • High groundwater and potential for site flooding from nearby Little Miami River • Design and installation of 113 24-inch diameter drilled piers to support dead and fluid loads and to prevent flotation • Construction inspection
Clarksville (TN) WWTP Improvements	Pat Hickey General Manager Clarksville Gas and Water 2215 Madison St. Clarksville, TN 37043 931.645.1654 pat.hickey@cityofclarksville.com	<ul style="list-style-type: none"> • Four 140-foot diameter final clarifiers (new) 	<ul style="list-style-type: none"> • High groundwater and potential for site flooding from nearby Red River • Design and installation of 278 34-ton rock anchors for buoyancy resistance (FC1 and FC2) • 30 wall-mounted pressure relief valves with exterior stone drainage layer (FC3 and FC4) • Construction inspection
North Olmsted (OH) WWTP Improvements	Brian Blum WWTP Superintendent City of North Olmsted 23775 Mastick Rd. North Olmsted, OH 44070 440.716.4175 blumb@north-olmsted.com	<ul style="list-style-type: none"> • Three 105-foot diameter final clarifiers (new) 	<ul style="list-style-type: none"> • Shallow bedrock • High groundwater and potential for site flooding • 16 wall-mounted pressure relief valves with exterior stone drainage layer • Construction inspection
GCWW Mount Airy (OH) Water Tanks Evaluation	Mark Raffenberg, PE Principal Engineer Greater Cincinnati Water Works 4747 Spring Grove Avenue Cincinnati, OH 45232 513.591.7863 Mark.Raffenberg@gcww.cincinnati-oh.gov	<ul style="list-style-type: none"> • Historic 8.5 MG water storage tank 	<ul style="list-style-type: none"> • Structural inspection and assessment • Cost and present worth analysis of repair options • Evaluation of multiple repair options

Appendix A

Affirmative Action Plan, Workforce Analysis, and MWDBE Participation





EQUAL OPPORTUNITY AGREEMENT

The Law

- Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and sub-contractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- Section 503 of the Rehabilitation Act of 1973 states:

The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.

- Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal contracts.
- Section 206(A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:

The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractors may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped and aged persons.



Signature

Hazen and Sawyer

Name of Business

WORKFORCE ANALYSIS FORM

Name of Organization: Hazen and Sawyer

Categories	Total	White (Not Hispanic or Latino)		Hispanic or Latino		Black or African-American (Not Hispanic or Latino)		Native Hawaiian and Other Pacific Islander (Not Hispanic or Latino)		Asian (Not Hispanic or Latino)		American Indian or Alaskan Native (not Hispanic or Latino)		Two or more races (Not Hispanic or Latino)		Total
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Administrators	78	58	12	3	0	0	0	0	0	5	0	0	0	0	0	66
Professionals	801	452	170	36	26	16	18	0	0	47	25	1	1	7	2	559
Superintendents																
Supervisors																
Foremen																
Technicians	86	40	9	8	4	18	0	0	0	5	0	0	0	2	0	73
Protective Service																
Para-Professionals																
Office/Clerical	64	5	34	0	8	3	7	0	0	1	3	0	0	1	2	10
Skilled Craft																
Service/Maintenance																
Total:	1,029	555	225	47	38	37	25	0	0	58	28	1	1	10	4	708

Prepared by: Cheryl A. Courchaine

Director of Human Resources/Affirmative Action Officer Date: 10/23/2017

(Name and Title)

Revised 2015-Dec-15

**DIRECTOR, DIVISION OF CENTRAL PURCHASING
LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 EAST MAIN STREET
LEXINGTON, KENTUCKY 40507**

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL
EMPLOYMENT OPPORTUNITIES AND DBE CONTRACT PARTICIPATION**

Notice of requirement for Affirmative Action to ensure Equal Employment Opportunities and Disadvantaged Business Enterprises (DBE) Contract participation. Disadvantaged Business Enterprises (DBE) consists of Minority-Owned Business Enterprises (MBE) and Woman-Owned Business Enterprises (WBE).

The Lexington-Fayette Urban County Government has set a goal that not less than ten percent (10%) of the total value of this Contract be subcontracted to Disadvantaged Business Enterprises, which is made up of MBEs and WBEs. The Lexington Fayette Urban County Government also has set a goal that not less than three percent (3%) of the total value of this Contract be subcontracted to Veteran-owned Small Businesses. The goal for the utilization of Disadvantaged Business Enterprises as well Veteran -owned Small Businesses as subcontractors is a recommended goal. Contractor(s) who fail to meet such goal will be expected to provide written explanations to the Director of the Division of Purchasing of efforts they have made to accomplish the recommended goal, and the extent to which they are successful in accomplishing the recommended goal will be a consideration in the procurement process. Depending on the funding source, other DBE goals may apply.

For assistance in locating Disadvantaged Business Enterprises Subcontractors contact:

**Sherita Miller, MPA, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507
smiller@lexingtonky.gov**

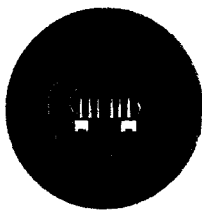
Firm Submitting Proposal: Hazen and Sawyer

Complete Address: 230 Lexington Green Circle, Suite 520, Lexington, KY, 40503
Street City Zip

Contact Name: Jon Schubarth, PE Title: Senior Associate, Office Manager

Telephone Number: (859) 219-1126 Fax Number: (859) 219-1134

Email address: jschubarth@hazenandsawyer.com



LFUCG MWDBE PARTICIPATION FORM

Bid/RFP/Quote Reference # 41-2017 (Investigation/Design Services for West Hickman WWTP
Final Clarifiers #7 & #8 Structural Repair Design/Construction Insp)

The MWDBE and/or veteran subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to Central Purchasing for approval immediately. **Failure to submit a completed form may cause rejection of the bid.**

MWDBE Company, Name, Address, Phone, Email	MBE WBE or DBE	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1. Integrated Engineering, PLLC 166 Prosperous Place, Ste 220 Lexington, KY 40509 Eddie Mesta, PE 859-368-0145, Ext. 220 eddie@int-engineering.com	MBE	Surveying, RPR Services	\$33,100.00	18.4%
2. Free Contracting, Inc. 1620 Old Frankfort Pike Lexington, KY 40504-1014 Fletcher Gabbard 859-225-2236 fletcher@freecontracting.com	WBE	Exploratory Demolition Services	\$55,000.00 (allowance)	30.6%
3.				
4.				

The undersigned company representative submits the above list of MWDBE firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Hazen and Sawyer

Company

2017-10-30

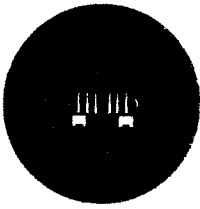
Date

Jon Schubarth, PE

Company Representative

Senior Associate

Title



MWDBE QUOTE SUMMARY FORM

Bid/RFP/Quote Reference # 41-2017 (Investigation/Design Services for West Hickman WWTP Final Clarifiers #7 & #8 Structural Repair Design/Construction Insp)

The undersigned acknowledges that the minority and/or veteran subcontractors listed on this form did submit a quote to participate on this project. Failure to submit this form may cause rejection of the bid.

Company Name Hazen and Sawyer	Contact Person Jon Schubarth, PE
Address/Phone/Email 230 Lexington Green Circle, Suite 520 Lexington, KY 40503 859.219.1126, jschubarth@hazenandsawyer.com	Bid Package / Bid Date #41-2017 / October 30, 2017

MWDBE Company Address	Contact Person	Contact Information (work phone, Email, cell)	Date Contacted	Services to be performed	Method of Communication (email, phone, meeting, ad, event etc)	Total dollars \$\$ Do Not Leave Blank (Attach Documentation)	MBE * AA HA AS NA Female	Veteran
Integrated Eng. 166 Prosperous Pl Lexington, KY 40509	Eddie Mesta, PE	859.368.0145 eddie@int-engineering.com	2017-10-18	Surveying & RPR Services	Phone call and email	\$33,100.00	AS	N/A
Free Contracting, Inc. 1620 Old Frankfort Pike Lexington, KY 40504-1014	Fletcher Gabbard	859.255-2236 fletcher@freecontracting.com	2017-10-18	Exploratory Demolition Services	In-person meeting, phone call and email	\$55,000.00	Female	N/A

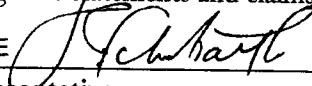
(MBE designation / AA=African American / HA= Hispanic American/AS = Asian American/Pacific Islander/ NA= Native American)

The undersigned acknowledges that all information is accurate. Any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Hazen and Sawyer

Company
 2017-10-30

Date

Jon Schubarth, PE 

Company Representative
 Senior Associate

Title

LFUCG STATEMENT OF GOOD FAITH EFFORTS

**Bid/RFP/Quote # 41-2017 (Investigation/Design Services for West Hickman WWTP
Final Clarifiers #7 & #8 Structural Repair Design/Construction Insp)**

By the signature below of an authorized company representative, we certify that we have utilized the following Good Faith Efforts to obtain the maximum participation by MWDBE and Veteran-Owned business enterprises on the project and can supply the appropriate documentation.

Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.

Included documentation of advertising in the above publications with the bidders good faith efforts package

Attended LFUCG Central Purchasing Economic Inclusion Outreach event

Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned Businesses of subcontracting opportunities

Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses

Requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG and showed evidence of contacting the companies on the list(s).

Contacted organizations that work with MWDBE companies for assistance in finding certified MWDBE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.

Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.

Followed up initial solicitations by contacting MWDBEs and Veteran-Owned businesses to determine their level of interest.

Provided the interested MWDBE firm and/or Veteran-Owned business with adequate and timely information about the plans, specifications, and requirements of the contract.

Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses in order to increase the likelihood of meeting the

contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate MWDBE and Veteran participation, even when the prime contractor may otherwise perform these work items with its own workforce

_____ Negotiated in good faith with interested MWDBE firms and Veteran-Owned businesses not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.

_____ Included documentation of quotations received from interested MWDBE firms and Veteran-Owned businesses which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.

_____ Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a MWDBE and/or Veteran-Owned business's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE and Veteran goals.

_____ Made an effort to offer assistance to or refer interested MWDBE firms and Veteran-Owned businesses to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

_____ Made efforts to expand the search for MWBE firms and Veteran-Owned businesses beyond the usual geographic boundaries.

_____ Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

NOTE: Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to approval by the MBE Liaison. Documentation of Good Faith Efforts must be submitted with the Bid, if the participation Goal is not met.

The undersigned acknowledges that all information is accurate. Any misrepresentations may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Hazen and Sawyer

Company

2017-10-30

Date

Jon Schubarth, PE



Company Representative

Senior Associate

Title



TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

August 13, 2015

Harsha Wijesiri, President
INTEGRATED ENGINEERING, PLLC
166 Prosperous Place, Suite 220
Lexington, KY 40509

Dear Mr. Wijesiri:

The Kentucky Transportation Cabinet's DBE Certification Committee, has determined that **INTEGRATED ENGINEERING, PLLC** continues to meet the eligibility requirements of a minority-owned Disadvantaged Business Enterprise (DBE) and remains program-eligible pursuant to 49 C.F.R., Part 26. Along with your DBE continuation, your Small Business Enterprise (SBE) certification has been reciprocally renewed.

INTEGRATED ENGINEERING, PLLC is DBE/SBE certified to perform the below NAICS codes, which include the following items of work:

NAICS code(s) for which DBE/SBE status is recognized: **237210, 541320, 541330, 541340, 541370**

Items of Work: *Consultant: land subdivision, landscape architectural services, engineering services, drafting services, surveying and mapping (except geophysical) services*

Absent a finding of regulatory non-compliance, a change in the majority ownership and/or control, or a successful third party challenge, **this certification will be eligible for review on August 30, 2018.**

In accordance with 49 C.F.R. §26.83(j), this firm will be required to submit an affidavit annually to determine whether your firm continues to meet the standards as set forth in 49 C.F.R., Part 26.

Sincerely,

Tony Youssefi
DBE Branch Manager
Small Business Development Branch

mrt/TY



An Equal Opportunity Employer M/F/D



Matthew G. Bevin
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.transportation.ky.gov/

Greg Thomas
Secretary

October 5, 2017

Rhonda Fister, President
FREE CONTRACTING, INC.
1620 Old Frankfort Pike
Lexington, KY 40504

Subject: DBE/SBE Certification

Dear Mrs. Fister:

The Kentucky Transportation Cabinet's DBE Certification Committee has determined that **FREE CONTRACTING, INC.** continues to meet the eligibility requirements of a woman-owned Disadvantaged Business Enterprise (DBE) and remains program-eligible pursuant to 49 C.F.R., Part 26.

Along with your DBE continuation, your Small Business Enterprise (SBE) certification has been reciprocally renewed.

FREE CONTRACTING, INC. is DBE/SBE certified to perform the below NAICS code(s), which include the following item(s) of work:

NAICS code(s) for which DBE/SBE status is recognized: 237310, 237990

Item(s) of Work: *highway, street and bridge construction and other heavy and civil engineering construction*

Absent a finding of regulatory non-compliance, a change in the majority ownership and/or control, or a successful third party challenge, **this certification will be eligible for review on October 30, 2020.**

In accordance with 49 C.F.R. §26.83(j), this firm will be required to submit an affidavit annually to determine whether your firm continues to meet the standards as set forth in 49 C.F.R., Part 26.

Sincerely,

Tony Youssefi
DBE Administrative Branch Manager
Small Business Development Branch

mrt/TY



An Equal Opportunity Employer M/F/D

Hazen

AFFIRMATIVE ACTION PLAN

**FOR
EQUAL OPPORTUNITY
EMPLOYMENT**

IN ACCORDANCE WITH EXECUTIVE ORDER 11246

**Hazen and Sawyer
Executive Order 11246
Affirmative Action Program**

	Title 41 CFR Section
Preliminary Statement	
Declaration of EEO Policy	60-250.44
Internal and External Dissemination of EEO Policy	60-250.44
Responsibility for Implementation	60-217 (a)
Identification of Problem Areas	60-217 (b)
Action-Oriented Programs	60-217 (c)
Internal Audit and Reporting System	60-217 (d)
Organizational Profile	60-2.11
Job Group Analysis	60-2.12
Utilization Analysis	60-2.13-2.15
Determining Availability	60-2.14

Hazen

PRELIMINARY STATEMENT

Business Environment

Hazen and Sawyer is an employee-owned professional corporation providing consulting services in environmental engineering and science to the public and private sectors since 1951. Hazen and Sawyer's staff includes approximately 800 engineers, scientists, architects, planners, designers and other specialists and support personnel. Corporate and Northeast headquarters are in New York City with regional headquarters in Raleigh, North Carolina, Cincinnati, Ohio, Hollywood, Florida, Dallas, Texas and Los Angeles, California.

Voluntary Affirmative Action Plan

Hazen and Sawyer has prepared this revised Affirmative Action Plan voluntarily as an affirmation of its commitment to equal employment opportunity and affirmative action. In the preparation of this plan, the terminology used in Executive Order 11246 and its implementing regulations has been used as a guide. Therefore, the use of such terms as "underutilization", "deficiency", "concentration", "affected class", etc., should not be construed as an admission that in fact either minorities or women have been or are presently being underutilized, concentrated, or discriminated against in any way in violation of federal, state or local fair employment practice laws. Further, nothing contained in this plan or its supporting data should be construed as an admission by Hazen and Sawyer that it has contravened any such federal, state or local employment practice laws.

EEO and Nondiscrimination Policy

In developing and implementing this plan, Hazen and Sawyer has been guided by its established policy of providing equal employment opportunity. Any goals which are established herein are not intended as rigid, inflexible quotas that must be met, but rather as targets reasonably attainable by applying every good faith effort in implementing this plan. The use of goals in this plan is not intended to discriminate against any individual or group of individuals with respect to any employment opportunity for which they are qualified on the grounds that they are not the beneficiaries of affirmative action themselves. Nothing herein is intended to sanction the discriminatory treatment of any person. Thus, this plan has been developed in strict reliance upon the Guidelines on Affirmative Action issued by the Equal Employment Opportunity Commission (EEOC) (29 C.F.R. Part 1608).

Hazen

Confidential Commercial Information

The material set forth in this plan is deemed to constitute commercial and financial data, the public disclosure of which could cause substantial competitive harm to Hazen and Sawyer. Accordingly, we request that the company be notified in writing by the agency, prior to disclosure, of any request for information pertaining to all or any part of this plan, and given an opportunity to present its objections to disclosure. This information and all support data, in accordance with the Paperwork Reduction Act of 1995, will only be released to an agency for compliance review and evaluation with presentation of a valid OMB control number.

The full affirmative action program shall be available to any employee or applicant for employment for inspection upon request. The location and hours during which the program may be obtained shall be posted at each of the Firm's establishments.

Cheryl A. Courchaine

Cheryl A. Courchaine
Corporate Director of Human Resources
Affirmative Action Officer

Hazen

TO: EMPLOYEES AND APPLICANTS FOR EMPLOYMENT

FROM: Charles S. Hocking, President and CEO

DATE: January 1, 2017

RE: DECLARATION OF EEO POLICY

Hazen and Sawyer affirms its commitment to the principle of Equal Employment Opportunity in its personnel policies and practices. It is Hazen and Sawyer's policy to recruit, hire, train and promote into all job levels, employees and applicants for employment without unlawful discrimination as to race, religion, creed, color, national origin, sex, sexual orientation, sexual preference, gender identification, age (unless confirming the applicant is of legal age to work), disability, veteran status, citizenship status, ancestry, military status, marital status, genetic information, genetic pre-disposition status, languages spoken (unless necessary for the job being applied for), familial status, pregnancy, domestic violence victim status, or any other basis prohibited by applicable Federal, State and/or local law. All such decisions are based on (1) individual merit, qualifications, and competence as they relate to the particular position, and (2) promotion of the principle of equal employment opportunity.

All other personnel programs such as compensation, benefits, transfers, layoff, return from layoff, training, education, tuition assistance, social and recreational programs are administered without unlawful discrimination as to race, religion, creed, color, national origin, sex, sexual orientation, sexual preference, gender identification, age (unless confirming the applicant is of legal age to work), disability, veteran status, citizenship status, ancestry, military status, marital status, genetic information, genetic pre-disposition status, languages spoken (unless necessary for the job being applied for), familial status, pregnancy, domestic violence victim status, or any other basis prohibited by applicable Federal, State and/or local law.

Hazen and Sawyer has developed and implemented an Affirmative Action Plan to support its commitment to the principle of equal employment opportunity. This Plan describes, in detail, the policies and procedures used in the company's operations to carry out its commitment.

Cheryl Courchaine, Director of Human Resources, has been appointed the Firm's Affirmative Action Officer. She is responsible for administering the company's Affirmative Action Program and will report to senior management on a continuing basis with regard to the progress being made under the Plan. A copy of this plan will be available for review during normal business hours. Anyone having questions, comments or complaints regarding the company's equal employment and affirmative action policies should contact Ms. Courchaine at (212) 539-7105.

Hazen

INTERNAL AND EXTERNAL DISSEMINATION OF EEO POLICY

Hazen and Sawyer takes specific steps to ensure the dissemination of information regarding its equal employment opportunity policy and Affirmative Action Plan. The following procedures describe the process of internal and external dissemination.

Internal Dissemination

1. Hazen and Sawyer's EEO policy is contained in its Employee Manual, which is distributed to all employees.
2. The Affirmative Action Officer holds periodic meetings with all executive, management and supervisory personnel to discuss the company's EEO policy and monitor progress under the AAP.
3. The company's EEO policy is discussed thoroughly in new employee orientation sessions and management training programs.
4. Employees are made aware of the company's EEO policy through a written statement from the President, which is posted on all company bulletin boards.
5. Company publications feature articles covering EEO programs and the progress of minorities and women in the company, and picture both minority and non-minority men and women.
6. The Affirmative Action Officer is readily accessible to all employees and is available to discuss EEO questions and concerns.

Hazen

External Dissemination

1. Hazen and Sawyer's EEO policy statement is included in recruiting material given to applicants for employment and recruiting sources.
2. Applicants for employment are made aware of the company's EEO policy by a statement of that policy printed on the *Employment Application Form*, and by posting the policy on the bulletin boards throughout the facility.
3. All recruiting advertising contains the tagline "Equal Opportunity Employer".
4. All recruiting sources are informed verbally and in writing of Hazen and Sawyer's EEO policy. The company stipulates that these sources actively recruit and refer minorities and women for all positions listed with them. A sample letter is attached.
5. Hazen and Sawyer provides written notification of its EEO policy to minority and women's organization, community agencies, community leaders and secondary schools and colleges.
6. Both minority and non-minority men and women are pictured in help-wanted advertising.

Hazen

January 1, 2017

Dear _____:

In order to standardize and equalize our treatment of all employment agencies who wish to work with us, please provide your current fee schedule and refund policy. Enclosed are two copies of our non-discrimination policy.

If we agree to your terms, we will sign and return the fee schedule. If you agree to our policies, please sign and return the letter, along with one copy of the non-discrimination policy and a fully executed fee schedule.

Very truly yours,

Cheryl Courchaine
Corporate Director of Human Resources
Affirmative Action Officer

Signature

Title

Date

Hazen

January 1, 2017

Dear :

Please be advised that Hazen and Sawyer is an equal opportunity employer and strictly adheres to the "Affirmative Action Plan for Equal Employment Opportunity" as follows:

The Hazen and Sawyer "Affirmative Action Plan for Equal Employment Opportunity" is designed to assure equal treatment of all employees and applicants for employment without unlawful discrimination as to race, religion, creed, color, national origin, sex, sexual orientation, sexual preference, gender identification, age, disability, veteran status, citizenship status, ancestry, military status, marital status, genetic information, genetic pre-disposition status, familial status, domestic violence victim status, or any other basis prohibited by applicable Federal, State and/or local law in all employment decisions, including but not limited to recruitment, hiring, compensation, training and apprenticeship, promotion, upgrading, demotion, downgrading, transfer, lay-off and termination and all other terms and conditions of employment.

To indicate to us that you concur with this policy, and represent our firm according to the above policy, it is requested that you sign in the space provided below and return one copy to us, retaining the other for your files.

Very truly yours,

Cheryl Courchaine
Corporate Director of Human Resources
Affirmative Action Officer

We concur with, and will abide by the above:

By:

Title:

Agency:

Date:



RESPONSIBILITY FOR IMPLEMENTATION

Charles S. Hocking, President and CEO of Hazen and Sawyer has overall responsibility for implementing the company's EEO policies. Cheryl Courchaine, Director of Human Resources, has been appointed the Affirmative Action Officer and has the primary management responsibility for ensuring full compliance with the provisions of Executive Order 11246 and its implementing regulations.

The administration and implementation of the company's EEO policies and the AAP is carried out through a system of total management involvement at all levels in the company. All levels of management within Hazen and Sawyer provide input and contribute to the development and implementation of the Affirmative Action Plan. Managers and supervisors understand that their performance is evaluated, in part, on the basis of their efforts and results in implementing the company's EEO policies and the AAP.

Affirmative Action Officer

The responsibilities of the Affirmative Action Officer include, but are not limited to, the following:

1. Assisting in the development of policy statements, affirmative action programs, and internal and external communication techniques;
2. Developing, implementing and maintaining audit and reporting systems that will:
 1. Measure the effectiveness of the company's program
 2. Indicate the need for remedial action; and
 3. Determine the degree to which goals and objectives have been attained.
3. Assisting in the identification of problem areas and the establishment of organizational goals and objectives.
4. Ensuring that all new employees receive an orientation to the Firm's EEO policy.
5. Performing periodic audits to ensure that the company's EEO policy is being carried out in all company operations, and that all the requirements of Executive Order 11246 and its implementing regulations are being met.

6. Serving as liaison between Hazen and Sawyer and enforcement agencies, and with responsible minority and women's organizations and community action groups concerned with employment opportunities for minorities and women.
7. Keeping management informed of the latest developments in the entire EEO area.

Managers and Supervisors

Managers and supervisors have the responsibility to support the Affirmative Action Officer in developing and accomplishing the goals of the AAP. Each manager and supervisor also is responsible for adhering to Hazen and Sawyer's policy of equal opportunity for all employees, and ensuring that such policy is understood and supported by all employees.

The duties of managers and supervisors include, but are not necessarily limited to, the following:

1. Assisting in the identification of problem areas and establishment of organization goals and objectives.
2. Periodically monitoring hiring, promotion and training activities to identify and remove impediments to the attainment of goals and objectives.
3. Periodically discussing with other managers, supervisors, and employees Hazen and Sawyer's affirmative action policies to be certain that they are being followed.
4. Reviewing the qualifications of employees within their area of responsibility to ensure that minorities and women are being given full opportunities for transfers and promotions.
5. Providing career counseling for employees within their area of responsibility.
6. Taking action to prevent the harassment of employees placed through affirmative action efforts, or because of their race, religion, creed, color, national origin, sex, sexual orientation, sexual preference, gender identification, age, disability, veteran status, citizenship status, ancestry, military status, marital status, genetic information, genetic pre-disposition status, familial status, domestic violence victim status, or any other basis prohibited by applicable Federal, State and/or local law

7. Conducting periodic audits to ensure that:

1. Posters are properly displayed;
2. All company offices are in fact desegregated, both in policy and practice;
and
3. Minority and women employees are afforded a full opportunity and are encouraged to participate in all company-sponsored educational, training, recreational and social activities.

Hazen

IDENTIFICATION OF PROBLEM AREAS

Hazen and Sawyer annually conducts an in-depth analysis of the following factors:

1. Composition of the workforce by minority group status and sex.
2. Composition of applicant flow where possible by minority group status and sex.
3. The total selection process.
4. Transfer and promotion practices.
5. Formal and informal training activities.
6. Company-sponsored activities.
7. Technical phases of compliance.

Workforce Composition

In addition to analyzing the general composition of the workforce, we also analyze the composition of job groups and organizational units to determine if any concentrations or under-representations of minorities and/or women exist.

Applicant Flow

Applicant flow data, identifying applicants where possible, by race and sex, is maintained and analyzed by job group and organizational unit.

Selection Process

The total selection process, including position descriptions, position titles, worker specifications, application forms, interview procedures, test administration, test validity, referral procedures, final selection and similar factors are reviewed and analyzed annually. This analysis indicates whether the selection process overall eliminates a significantly higher percentage of minorities or women than non-minorities or men. The analysis also shows whether the individual components of the selection process are applied uniformly, and whether they result in minorities or women being adversely affected.

Transfer and Promotion

The records of transfer and promotion activity are reviewed to determine if the percentage representation of minorities and women among those who are transferred or promoted is consistent with their representation in the workforce.

Training

The company's training programs are designed to improve an employee's ability to perform in the present assignment, as well as prepare for more responsible and challenging positions in the future. These are open to all employees. The Firm is NYSED approved and can award P.D.H.'s for the appropriate internal, continuing educational instruction.

Additionally, as stated in the Employee Manual, Hazen and Sawyer has a Tuition Reimbursement Plan to encourage and assist the further professional education of all employees.

Company-Sponsored Activities

The records of company-sponsored recreational, sporting and social activities for employees are reviewed to determine the extent to which minorities and women participate in these activities. Management efforts to ensure a full opportunity to participate, and encourage participation in these activities by minorities and women, also are reviewed.

Technical Phases of Compliance

The efforts of the Affirmative Action Officer and managers in maintaining the technical aspects of compliance are reviewed to ensure that they are adequate and timely.

Hazen

ESTABLISHMENT OF GOALS AND OBJECTIVES

An in-depth analysis of the workforce and the company's personnel practices and programs indicates whether there are problem areas. Goals are established to correct any identified deficiencies. Where these problem areas have been identified, action-oriented programs are established to overcome these problems. Where underutilization has been identified in job groups, percentage goals are set, and steps are developed to achieve these goals.



DEVELOPMENT AND EXECUTION OF ACTION-ORIENTED PROGRAMS

In an effort to eliminate identified problem areas and achieve established goals and objectives, Hazen and Sawyer will continue to implement programs designed to enhance the utilization of minorities and women, including but not limited to the following action-oriented programs:

1. Review all position descriptions to make certain that they are accurate, and that the experience and other qualifications stated are free of inadvertent bias, thereby establishing a consistent standard for selection from among all candidates for employment or promotion.
2. Recruit at colleges and universities with significant minority and women populations.
3. Contact the state employment service and various minority and women's organizations in order to obtain candidates for all level positions.
4. Include the EEO statement in all recruitment advertising.
5. Deal only with EEO-committed employment agencies.
6. Monitor hiring and promotion activities to ensure that equal opportunities are given to minorities and women.
7. Continue to encourage minorities and women to participate in training programs to prepare them for advancement opportunities and provide mentoring to entry-level employees and other employees as requested.

Hazen

INTERNAL AUDIT AND REPORTING SYSTEM

Hazen and Sawyer believes that one of the most important elements in effectively implementing its EEO policies is maintaining an adequate system of self-inspection and recordkeeping. Through such a system, personnel activity can readily be analyzed, and progress towards the achievement of goals and objectives can be measured. For this purpose, the company has established the following internal procedures:

1. Records are maintained for each job title, by job group, by office location where appropriate, by race including minority subgroup, and by gender, for all applicants, offers, hires, transfers, promotions and terminations.
2. Reports of these activities are compiled on a regular basis to assess the progress made toward established goals and objectives for organizational units and job groups.
3. The Affirmative Action Officer reviews the progress reports with officers and makes appropriate adjustments in the action-oriented programs.
4. The Affirmative Action Officer advises senior management of the effectiveness of the affirmative action program, and recommends changes to improve performance.

Hazen

COMPLIANCE WITH GENDER DISCRIMINATION GUIDELINES

To ensure compliance with all prohibitions against discrimination on the basis of gender, Hazen and Sawyer will continue to observe the following policies:

Recruiting and Advertising

- Both men and women are recruited for all positions in the company.
- Advertisements for employment opportunities do not express a gender preference.

Job Policies and Practices

- All personnel policies and practices are administered on an equal basis without regard to gender. No distinction based upon gender is made in employment opportunities, wages, hours, conditions of employment, pensions, fringe benefits and recreation programs
- Employees and applicants of both sexes have an equal opportunity for any available position he or she is qualified to perform.
- Regardless of gender, persons married and unmarried are treated equally in terms of personnel policies including fringe benefits. Age and number of children are not a factor in offers of employment. Retirement age and benefits are equal for both sexes.
- Appropriate physical facilities are provided for employees & applicants of both sexes.
- Any conflicting state laws are superseded by Title VII of the Civil Rights Act; thus, these laws are not a factor in employment offers or personnel practices.

- Women are not penalized in conditions of employment because of time spent away from work for childbearing. Qualifications for a leave of absence are the same for employees of both sexes. Disabilities created or contributed to by pregnancy, childbearing or related medical conditions are treated the same as disabilities caused or contributed to by other medical conditions.
- Accommodations (such as flexible and reduced-hour work schedules, private areas to express milk for nursing mothers) are provided for those returning to work.
- A leave of absence is granted to an employee for a medically required period of time due to disabilities created or contributed to by pregnancy, childbearing or related medical conditions. Upon return from leave of absence, the employee is returned to the same or a substantially comparable job.
- There is no difference between men and women employees in age requirements for either mandatory or optional retirement.

Discriminatory Wages

- Wage schedules are not related to or based on the gender of employees.
- Job classifications are not restricted to employees of one gender.

Affirmative Action

- Women are recruited for all positions, particularly those from which they have been previously excluded, and where they are under-represented.
- Distinctions based on gender are not made in selecting employees for management training and other types of training programs.

Sexual Harassment

- Company policy specifically prohibits any supervisor, employee, or agent from engaging in behavior that constitutes harassment or intimidation of any kind on the basis of gender.
- Employees at all levels attend mandatory seminars titled, "Respect in the Workplace: Understanding and Preventing Discrimination, Harassment and Sexual Harassment"

Hazen

SUPPORT OF COMMUNITY ACTION PROGRAMS

Hazen and Sawyer is committed to support local and national community action programs designed to improve the employment opportunities of minorities and women. This commitment is carried out through the following activities:

- Encouraging members of management to serve on governmental boards and commissions, in local civic organizations and in community development activities.
- Making employees, particularly minorities and women, available to participate in community programs.
- Actively supporting the programs and activities of national and community organizations committed to enhancing employment opportunities for minorities and women such as the National Society for Black Engineers, Society of Hispanic Professionals, Society for Women Engineers, among others.
- Placing help wanted advertising in minority news media and women's interest media.
- Cooperating with and assisting schools within the community in order to enhance employment opportunities for minorities and women.

Hazen

CONSIDERATION OF MINORITIES AND WOMEN NOT CURRENTLY IN THE WORKFORCE

Hazen and Sawyer is involved in various programs designed to facilitate the employment of minorities and women not currently in the workforce. These include:

1. Recruiting for positions through the state employment service and minority employment organizations.
2. On-the-job training for entry-level unskilled positions.
3. Part-time employment and flexible hours work schedules when possible.
4. Cooperative and internship programs.

Hazen

ORGANIZATIONAL PROFILE

Hazen and Sawyer has conducted an analysis of its workforce consistent with its organization structure as shown on the Statistical Workforce Analysis. The analysis identifies all appropriate organizational units. In addition job groups, which make up lines of progression or career paths (Registered Professionals) are noted.

Hazen

JOB GROUP ANALYSIS

Hazen and Sawyer has analyzed its job titles and organized them into relatively homogeneous job groups based on similarities among the titles' job content, wage or salary rates and promotional opportunities. The grouping of titles was based on, among other things, the similar content of job titles as described in the company's job classification system and the opportunities for promotion in the titles as determined from past promotional records.

Hazen

AVAILABILITY ANALYSIS

Hazen and Sawyer has conducted an analysis of each job group to determine what skills are required to perform the jobs in that group. The company has analyzed census and other data to determine the extent to which minorities and women with those skills are available for employment in the labor market areas from which the company draws its employees (external availability). The company also has looked at its own workforce to identify those employees who can be promoted or transferred into the job group, or who can be trained in the skills needed for entry into the job group (internal availability).

Based on these analyses, the company arrived at an estimate of the percent of minorities and women, both external and internal, who have the skills required for jobs in a specific job group (availability). This availability is compared to the number of minorities and women actually employed in the job group in order to determine the extent to which minorities and women are being utilized in the job group.

These analyses are conducted for each job group, and for minorities and women separately, on an annual basis.

Hazen

UTILIZATION ANALYSIS/GOALS AND TIMETABLES

Hazen and Sawyer has reviewed all job groups to identify those groups in which the number of minorities or women actually employed in the group (utilization rate) is less than their availability. Where this was found to be the case, the data was analyzed using appropriate statistical methodology to determine if the difference between the utilization rate and availability constituted "underutilization".

For those job groups in which underutilization of at least one full person was found, the company has established an affirmative action placement goal and/or program goal designed to eliminate the underutilization.



**SECTION 503 & VEVRAA
AFFIRMATIVE ACTION PROGRAM**

For

**HAZEN AND SAWYER
498 SEVENTH AVENUE
NEW YORK, NEW YORK**

Title 41	CFR Section
Equal Opportunity Policy Statement For Qualified Individuals with Disabilities and Qualified Protected Veterans	60-250.44(a) 60-741.44(a)
Review of Personnel Processes	60-250.44(b) 60-741.44(b)
Review of Physical and Mental Job Qualification Standards	60-250.44(c) 60-741.44(c)
Reasonable Accommodation to Physical and Mental Limitations	60-250.44(d) 60-741.44(d)
Harassment Prevention Procedures	60-250.44(e) 60-741.44(e)
External Dissemination of Policy, Outreach and Positive Recruitment	60-250.44(f) 60-741.44(f)
Internal Dissemination of Policy	60-250.44(g) 60-741.44(g)
Audit and Reporting Systems	60-250.44(h) 60-741.44(h)
Responsibility for Implementation of AAP	60-250.44(i) 60-741.44(i)
Training to Ensure AAP Implementation	60-250.44(j) 60-741.44(j)
Invitation to Self-Identify	60-250.42 60-741.42

Hazen

Policy Statement - Equal Employment Opportunity for Qualified Individuals with Disabilities and Qualified Protected Veterans

It is the policy of Hazen and Sawyer not to discriminate against any employee or applicant for employment because he or she is a qualified individual with a disability, a disabled veteran, a newly separated veteran, a campaign veteran, or an armed forces service medal veteran (i.e., qualified protected veterans). It is also the policy of Hazen and Sawyer to take affirmative action to employ and to advance in employment, all persons regardless of their status as qualified individuals with disabilities or qualified protected veterans, and to base all employment decisions only on valid job requirements. This policy shall apply to all employment actions, including but not limited to recruitment, hiring, upgrading, promotion, transfer, demotion, layoff, recall, termination, rates of pay or other forms of compensation and selection for training, including apprenticeship, at all levels of employment.

Employees of and applicants to Hazen and Sawyer will not be subject to harassment, intimidation, threats, coercion, or discrimination because they have engaged or may engage in filing a complaint, assisting in a review, investigation, or hearing or have otherwise sought to obtain their legal rights related to any Federal, State, or local law regarding EEO for qualified individuals with disabilities or qualified protected veterans.

We are committed to the principles of Affirmative Action and Equal Employment Opportunity. In order to ensure dissemination and implementation of equal employment opportunity and affirmative action throughout all levels of the company, I have selected Cheryl Courchaine, Director of Human Resources, as the Equal Employment Opportunity (EEO) Officer for Hazen and Sawyer. One of her duties will be to establish and maintain an internal audit and reporting system to allow for effective measurement of Hazen and Sawyer's programs.

In furtherance of Hazen and Sawyer's policy regarding Affirmative Action and Equal Employment Opportunity, Hazen and Sawyer has developed a written Affirmative Action Program which sets forth the policies, practices and procedures which Hazen and Sawyer is committed to applying in order to ensure that its policy of non-discrimination and affirmative action for qualified individuals with disabilities and qualified protected veterans is accomplished. This Affirmative Action Program is available for inspection by any employee or applicant for employment upon request during normal business hours.

Charles S. Hocking
President and Chief Executive Officer
January 1, 2017

Hazen

Review of Personnel Processes

Hazen and Sawyer reviews annually its personnel processes to determine whether its present procedures assure careful, thorough and systematic consideration of the qualifications of known qualified individuals with disabilities and qualified protected veterans. This review covers all procedures related to the filling of job vacancies either by hire or by promotion, as well as all training opportunities offered or made available to employees.

In determining the qualifications of veterans, Hazen and Sawyer limits its consideration of a qualified protected veteran's military record, including discharge papers, to only that portion of the record, which is relevant to the specific job qualifications for which the veteran is being considered.

Based upon Hazen and Sawyer's review of its personnel processes, Hazen and Sawyer will modify the personnel processes when necessary, and will include the development of new procedures in this Affirmative Action Program to ensure equal employment opportunity. To date, no modifications have been necessary.

Hazen

Review of Physical and Mental Job Qualification Standards

The physical and mental job qualifications of all jobs will be reviewed to ensure that, to the extent that such qualification requirements tend to screen out qualified individuals with disabilities and qualified disabled veterans, job qualifications are consistent with business necessity and the safe performance of the job.

Up to now, no qualification requirements have been identified as having a screening effect. All job qualification requirements will be monitored for job-relatedness and consistency with business necessity and safety.

Hazen and Sawyer will continue to review physical and mental job qualification requirements whenever a job is vacated and the company intends to fill it through either hiring or promotion and will conduct a qualifications review whenever job duties change.

No pre-employment physical examinations or questionnaires are used by Hazen and Sawyer in its hiring process.

If at any time in the future, Hazen and Sawyer should inquire into an employee's physical or mental condition or should conduct a medical examination prior to a change in employment status, Hazen and Sawyer affirms that information obtained as a result of the inquiry will be kept confidential, except as otherwise provided for in the Section 503 regulations. The results of the examination or inquiry will be used in accordance with the Section 503 Regulations.

Hazen

Reasonable Accommodation to Physical and Mental Limitations

Hazen and Sawyer commits to making a reasonable accommodation to the known physical and mental limitations of qualified individuals with disabilities and qualified disabled veterans, unless such accommodation would impose an undue hardship on the conduct of its activities. In determining the extent of its obligation, Hazen and Sawyer will consider business necessity and financial costs and expenses, among other factors.

Hazen

Harassment Prevention Procedures

Employees of and applicants to Hazen and Sawyer will not be subject to harassment, intimidation, threats, coercion, or discrimination because they have engaged or may engage in filing a complaint, assisting in a review, investigation, or hearing or have otherwise sought to obtain their legal rights related to any federal, state, or local law regarding EEO for qualified individuals with disabilities or qualified protected veterans. Any employees or applicants who feel that they have been subject to harassment, intimidation, threats, coercion, or discrimination because of their disability or status as a qualified protected veteran should contact the EEO Officer for assistance. This policy is communicated to all employees and supervisors annually; and a notice is posted.

Hazen

External Dissemination of Policy, Outreach and Positive Recruitment

All subcontractors, vendors and suppliers have been sent written notification of the Hazen and Sawyer Equal Employment Opportunity and Affirmative Action policies.

All recruiting sources have been informed of the company's policy concerning the employment of qualified individuals with disabilities and qualified protected veterans and have been advised to actively recruit and refer qualified persons for job opportunities.

Hazen and Sawyer lists all suitable employment openings with the appropriate local office of the State Employment Service and maintains regular contact with the local Veterans Employment Representative.

A copy of Hazen and Sawyer Affirmative Action Policy for qualified individuals with disabilities and qualified protected veterans is provided to the State Employment Service annually.

The equal employment opportunity clause concerning the employment of qualified individuals with disabilities and qualified protected veterans is included in all nonexempt subcontracts and purchase orders.

Hazen

Internal Dissemination of Policy

Copies of our affirmative action programs will be made available for inspection to any employee or applicant upon request to promote understanding, acceptance and support. Policies are re-emphasized to managers and supervisors annually.

Hazen and Sawyer's Affirmative Action policy and the EEO poster are posted on bulletin boards located throughout our facilities and office work areas.

All applicants who believe they are a qualified individual with a disability, as defined in Section 503 of the Rehabilitation Act of 1973, as amended, or who are a qualified protected veteran under the equal employment opportunity provisions of the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, will be invited to identify themselves if they wish to benefit under this affirmative action program. Such invitation is posted on bulletin boards throughout the facility and work areas. Employees may self identify at anytime.

All employees are advised annually of the company's policy and encouraged to aid in Hazen and Sawyer's affirmative action efforts to ensure a fair and effective program.

Briefing sessions are conducted annually for managers and supervisors to review the applicable regulations and to discuss such affirmative action measures as training and reasonable accommodation.

When making internal Equal Opportunity audits, implementation of this affirmative action program will be reviewed.

Hazen

Audit and Reporting Systems

Our EEO Officer has the responsibility for developing and preparing the formal documents of the AAP. She is responsible for the effective implementation of the AAP. Hazen and Sawyer's audit and reporting system is designed to:

- Measure the effectiveness of the AAP/EEO program;
- Document personnel activities;
- Identify problem areas where remedial action is needed; and
- Determine the degree to which Hazen and Sawyer's AAP goals and objectives have been obtained.

The following activities are reviewed at least annually to ensure freedom from stereotyping qualified individuals with disabilities and qualified protected veterans in any manner, including that which may limit their access to any job for which they are qualified:

- Recruitment, advertising, and job application procedures;
- Hiring, promotion, upgrading, and separation;
- Rates of pay and any other forms of compensation including fringe benefits;
- Job assignments, job classifications, job descriptions, and seniority lists;
- Sick leave, leaves of absence, or any other leave;
- Training and attendance at professional meetings and conferences; and
- Any other term, condition, or privilege of employment.

Hazen and Sawyer's audit system includes a quarterly report documenting Hazen and Sawyer's efforts to achieve its EEO/AAP responsibilities.

Hazen

Responsibility for Implementation of AAP

In furtherance of Hazen and Sawyer's commitment to Affirmative Action and Equal Employment Opportunity for qualified individuals with disabilities and qualified protected veterans, our EEO Officer has the responsibility for designing and ensuring effective implementation of Hazen and Sawyer's AAP. These responsibilities include, but are not limited to:

1. The development of the AAP for individuals with disabilities and protected veterans, policy statements, personnel policies and procedures, internal and external communication of the policy, and monitoring the effectiveness of these actions;
2. Reviewing all personnel actions, policies, and procedures to ensure compliance with Hazen and Sawyer's affirmative action obligations;
3. Reviewing the qualifications of all applicants and employees to ensure qualified individuals are treated in a nondiscriminatory manner when hiring, promotion, transfer and termination actions occur;
4. Assisting in the identification of problem areas and the development of solutions to those problems;
5. Monitoring the effectiveness of the program on a continuing basis through the development and implementation of an internal audit and reporting system that measures the effectiveness of the program;
6. Keeping the Chief Executive Officer of Hazen and Sawyer informed of equal opportunity progress and problems within the company through quarterly reports;
7. Providing Hazen and Sawyer executives with a copy of the Affirmative Action Program for Qualified Individuals with Disabilities and Qualified Protected Veterans and reviewing the program with them on an annual basis to ensure knowledge of their responsibilities for implementation of the program;
8. Reviewing Hazen and Sawyer's AAP for qualified individuals with disabilities and qualified protected veterans with all managers and supervisors at all levels to ensure that the policy is understood and is followed in all personnel activities;
9. Auditing the contents of company bulletin boards annually to ensure that compliance information is posted and is up-to-date;
10. Serving as liaison between Hazen and Sawyer and enforcement agencies; and
11. Serving as liaison between Hazen and Sawyer and organizations for qualified individuals with disabilities and qualified protected veterans.

Hazen

Training to Ensure AAP Implementation

Training is provided to all personnel involved in the recruitment, screening, hiring, promotion, disciplinary and related employment processes, to ensure that the commitments made in Hazen and Sawyer's AAP are implemented.

Invitation to Self-Identify for Qualified Protected Veterans

1. Hazen and Sawyer is a federal contractor subject to the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, which requires federal contractors to take affirmative action to employ and advance in employment qualified disabled veterans and qualified protected veterans.
2. **An invitation to veterans of the Vietnam era only:** If you are a veteran of the Vietnam era, we would like to include you under our affirmative action program. If you would like to be included under the affirmative action program, please tell us. The term "veteran of the Vietnam era" refers to a person who served on active duty for a period of more than 180 days, and was discharged or released there from, with other than a dishonorable discharge, if any part of such active duty occurred in the Republic of Vietnam between February 28, 1961, and May 7, 1975 or between August 5, 1964, and May 7, 1975, in all other cases. The term also refers to a person who was discharged or released from active duty for a service connected disability if any part of such active duty was performed in the Republic of Vietnam between February 28, 1961, and May 7, 1975, or between August 5, 1964, and May 7, 1975, in all other cases.

An invitation to qualified disabled veterans only: If you are a qualified special disabled veteran, we would like to include you in our affirmative action program. If you would like to be included under the affirmative action program, please tell us. This information will assist us in placing you in an appropriate position and in making accommodations for your disability. The term "qualified special disabled veteran" refers to a veteran who is entitled to compensation (or who, but for the receipt of military retired pay, would be entitled to compensation) under laws administered by the Department of Veterans Affairs for a disability rated at 30 percent or more, or rated at 10 or 20 percent in the case of a veteran who has been determined by the Department of Veterans Affairs to have a serious employment handicap. The term also refers to a person who was discharged or released from active duty because of a service-connected disability.

An invitation to both (1) veterans of the Vietnam era and (2) qualified disabled veterans: If you are a veteran of the Vietnam era or a qualified special disabled veteran, we would like to include you under our affirmative action program. If you would like to be included under the affirmative action program, please tell us. The term "veteran of the Vietnam era" refers to a person who served on active duty for a period of more than 180 days, and was discharged or released therefrom with other than a dishonorable discharge, if any part of such active duty occurred in the Republic of Vietnam between February 28, 1961, and May 7, 1975 or between August 5, 1964, and May 7, 1975, in all other cases.

The term also refers to a person who was discharged or released from active duty for a service connected disability if any part of such active duty was performed in the Republic of Vietnam between February 28, 1961, and May 7, 1975, or between August 5, 1964, and May 7, 1975, in all other cases.

The term "qualified special disabled veteran" refers to a veteran who is entitled to compensation (or who, but for the receipt of military retired pay, would be entitled to compensation) under laws administered by the Department of Veterans Affairs, for a disability rated at 30 percent or more, or rated at 10 or 20 percent in the case of a veteran who has been determined by the Department of Veterans Affairs to have a serious employment handicap. The term also refers to a person who was discharged or released from active duty because of a service-connected disability.

3. You may inform us of your desire to benefit under the program at this time and/or at any time in the future.
4. Submission of this information is voluntary and refusal to provide it will not subject you to any adverse treatment. The information provided will be used only in ways that are not inconsistent with the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended.
5. The information you submit will be kept confidential, except that (i) supervisors and managers may be informed regarding restrictions on the work or duties of qualified disabled veterans, and regarding necessary accommodations; (ii) first aid and safety personnel may be informed, when and to the extent appropriate, if you have a condition that might require emergency treatment; and (iii) government officials engaged in enforcing laws administered by OFCCP, or enforcing the Americans with Disabilities Act, may be informed.
6. If you are a qualified special disabled veteran it would assist us if you tell us about (i) any special methods, skills, and procedures which qualify you for positions that you might not otherwise be able to do because of your disability so that you will be considered for any positions of that kind, and (ii) the accommodations which we could make which would enable you to perform the job properly and safely, including special equipment, changes in the physical layout of the job, elimination of certain duties relating to the job, provision of personal assistance services or other accommodations. This information will assist us in placing you in an appropriate position and in making accommodations for your disability.
7. A written copy of this Affirmative Action Program is available for inspection by any employee or applicant for employment, during normal business hours in the Human Resources Department.

Note: Paragraph 6 (ii) above is to be omitted when this invitation to self-identify is being extended prior to an offer of employment. This avoids conflict with EEOC's guidance under the ADA, which in most cases precludes asking a job applicant about potential reasonable accommodations prior to a job offer being made.

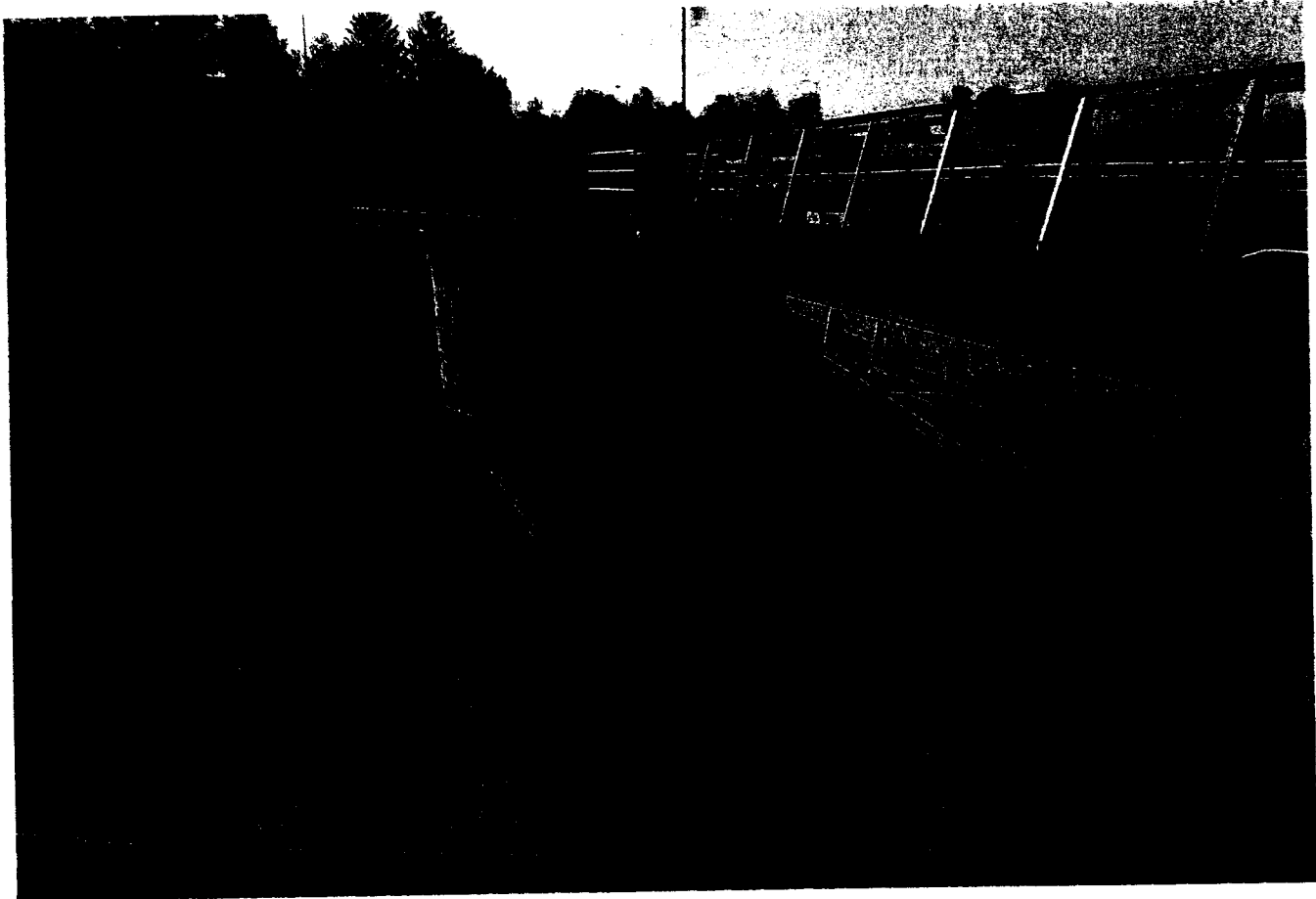
Hazen

Invitation to Self-Identify for Individuals with Disabilities

1. Hazen and Sawyer is a Government contractor subject to section 503 of the Rehabilitation Act of 1973, as amended, which requires Government contractors to take affirmative action to employ and advance in employment qualified individuals with disabilities.
2. If you have a disability and would like to be considered under the affirmative action program, please tell us.
3. You may inform us of your desire to benefit under the program at this time and/or at any time in the future. This information will assist us in placing you in an appropriate position and in making accommodations for your disability.
4. Submission of this information is voluntary and refusal to provide it will not subject you to any adverse treatment. The information provided will be used only in ways that are not inconsistent with Section 503 of the Rehabilitation Act.
5. Information you submit about your disability will be kept confidential, except that (i) supervisors and managers may be informed regarding restrictions on the work or duties of qualified individuals with disabilities, and regarding necessary accommodations; (ii) first aid and safety personnel may be informed, when and to the extent appropriate, if the condition might require emergency treatment; and (iii) government officials engaged in enforcing laws administered by OFCCP or the Americans with Disabilities Act, may be informed.
6. If you are a qualified individual with a disability, we would like to include you under the affirmative action program. It would assist us if you tell us about (i) any special methods, skills, and procedures which qualify you for positions that you might not otherwise be able to do because of your disability so that you will be considered for any positions of that kind, and (ii) the accommodations which we could make which would enable you to perform the job properly and safely, including special equipment, changes in the physical layout of the job, elimination of certain duties relating to the job, provision of personal assistance services or other accommodations.
7. A written copy of this Affirmative Action Program is available for inspection by any employee or applicant for employment, during normal business hours, in the Human Resources Department. .

Note: Paragraph 6 (ii) above is to be omitted when this invitation to self-identify is being extended prior to an offer of employment. This avoids conflict with EEOC's guidance under the ADA, which in most cases precludes asking a job applicant about potential reasonable accommodations prior to a job offer being made.

Appendix B
Affidavit





AFFIDAVIT

Comes the Affiant, Jonathan E. Schubarth, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is Jonathan E. Schubarth and he/she is the individual submitting the proposal or is the authorized representative of Hazen and Sawyer, the entity submitting the proposal (hereinafter referred to as "Proposer").

2. Proposer will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.

3. Proposer will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.

4. Proposer has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.

5. Proposer has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Proposer will not violate any provision of the campaign finance laws of the Commonwealth.

6. Proposer has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as "Ethics Act."

Continued on next page

7. Proposer acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught.



STATE OF Kentucky

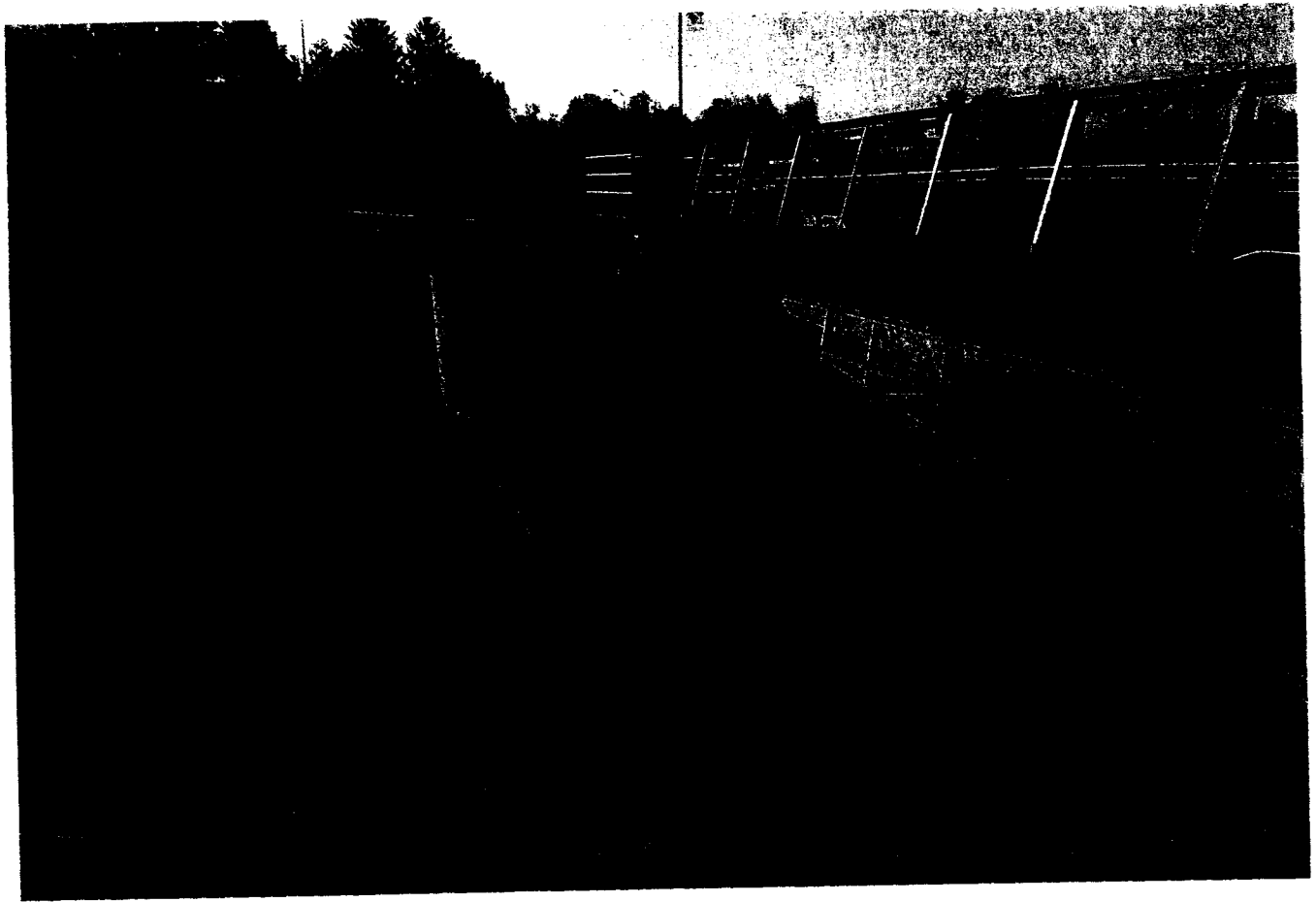
COUNTY OF Jefferson

The foregoing instrument was subscribed, sworn to and acknowledged before me
by Jonathan Z. Schubarth on this the 23rd
day of October, 2017.

My Commission expires: 2-24-2020

Jennifer M. Sellers
NOTARY PUBLIC, STATE AT LARGE

Appendix C
Addenda





MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #1

RFP Number: #41-2017

Date: October 3, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced RFP:

The Engineering Services Agreement for this project is attached.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: Hazen and Sawyer

ADDRESS: 230 Lexington Green Circle, Suite 520, Lexington, KY 40503

SIGNATURE OF BIDDER: 



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #2

RFP Number: #41-2017

Date: October 9, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following changes to the above referenced RFP:

Pre-proposal Change:

Pre-proposal meeting will be conducted on October 11, 2017, 10:00am located at 645 West Hickman Plant Road, Jessamine County. The site will be available for visits from 9:00am-4:00pm on 10/11/2017 and from 9:00am-4:00pm on 10/17/2017.

Documents, reports and pictures pertaining to the finals in need of repair will be available for review on site. Due to the rain people will not be able to access the bottom of the clarifiers until the inflow of groundwater stops.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: Hazen and Sawyer

ADDRESS: 230 Lexington Green Circle, Suite 520, Lexington, KY 40503

SIGNATURE OF BIDDER:



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #3

RFP Number: #41-2017

Date: October 12, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following changes to the above referenced RFP:

See attached drawings and reports from the pre-bid meeting.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: Hazen and Sawyer

ADDRESS: 230 Lexington Green Circle, Suite 520, Lexington, KY 40503

SIGNATURE OF BIDDER: 



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #4

RFP Number: #41-2017

Date: October 13, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following changes to the above referenced RFP:

Pre-proposal sign in sheet is attached.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: Hazen and Sawyer

ADDRESS: 230 Lexington Green Circle, Suite 520, Lexington, KY 40503

SIGNATURE OF BIDDER: 



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #5

RFP Number: #41-2017

Date: October 17, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following changes to the above referenced RFP:

1. Page 32, E. Task 5, (5)

Would LFUCG consider providing the number of total hours for construction inspections as a standard number for bidders to estimate their bid? The current statement is open ended and allows the potential for variations which will affect bid prices. It seems that the cost per hour would be the important number for LFUCG.

Answer: LFUCG will not specify the total # of hours for construction inspections. Knowing the total hours and the Cost/Hour. We can back that out of the total Construction Administration Services when comparing the proposals.

2. Page 33, 5. Schedule and Completion:

We realize that the completion dates after December 2017 should be year 2018 but for record keeping would this be stated in an Addendum?

Answer: Please not the revision shown below for the Dates shown in Section 5 of the Request for Proposal (RFP).

Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection

Award Design Contract
Meeting to Review Final Design – 90% Completion

December 2017
April ~~2017~~ 2018



Bid Opening
Award of GC Contract

May ~~2017~~ 2018
June ~~2017~~ 2018

3. Page 31, Task 3, (1) Detailed Design

Subsection (1) lists progress meetings at the 25%, 50% and 90% design stages. On page 33, Schedule and Completion only lists a design review meeting at the 90% stage. Please clarify if 3 or only 1 design review meetings are required.

Answer: There are 3 required meetings: 25%, 50% and 90% design stages. LFUCG is suggesting the date of the 90% design meeting to make sure the project is on schedule at that point. The other 2 will be scheduled by the consultant as the design progresses.



Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: Hazen and Sawyer

ADDRESS: 230 Lexington Green Circle, Suite 520, Lexington, KY 40503

SIGNATURE OF BIDDER:  _____



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #6

RFP Number: #41-2017

Date: October 24, 2017

Subject: Investigation/Design Services for West Hickman WWTP Final Clarifiers
7 & 8 Structural Repair Design/Construction Inspection

Address inquiries to:
Brian Marcum
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following changes to the above referenced RFP:

Sheet S-3 is attached.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: Hazen and Sawyer

ADDRESS: 230 Lexington Green Circle, Suite 520, Lexington, KY 40503

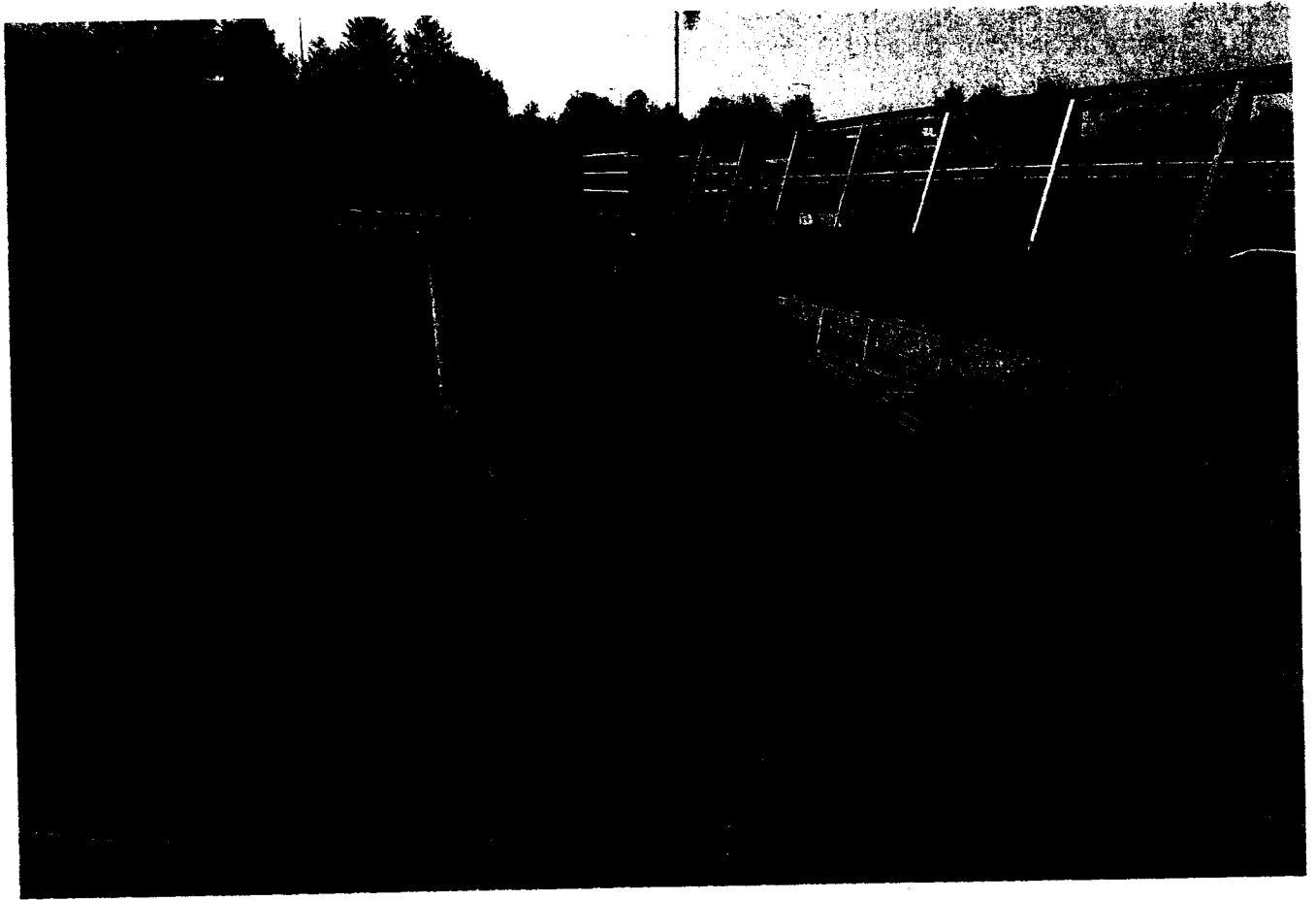
SIGNATURE OF BIDDER:

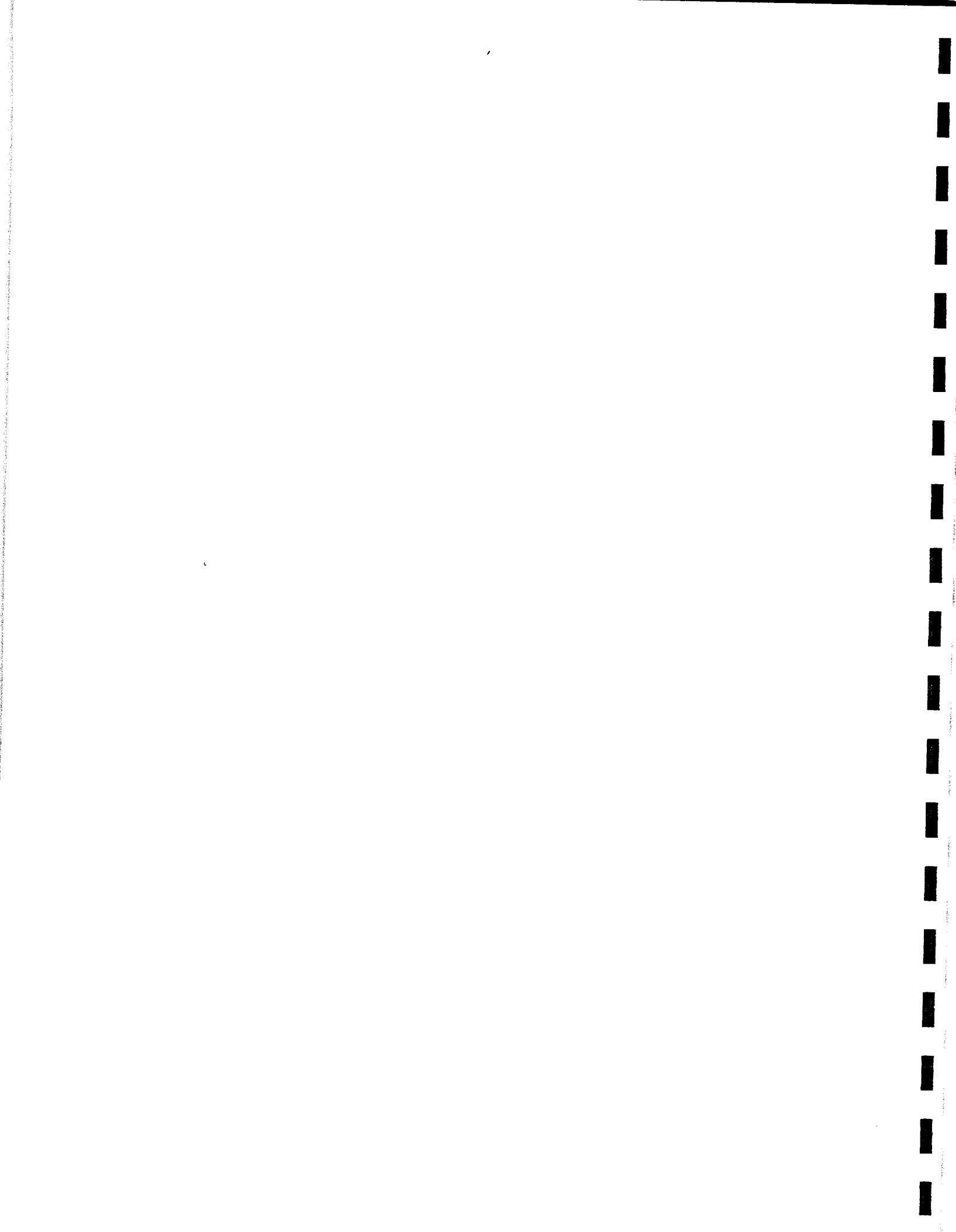




Appendix D

General Provisions





GENERAL PROVISIONS

1. Each Respondent shall comply with all Federal, State & Local regulations concerning this type of service or good.

The Respondent agrees to comply with all statutes, rules, and regulations governing safe and healthful working conditions, including the Occupational Health and Safety Act of 1970, 29 U.S.C. 650 *et. seq.*, as amended, and KRS Chapter 338. The Respondent also agrees to notify the LFUCG in writing immediately upon detection of any unsafe and/or unhealthful working conditions at the job site. The Respondent agrees to indemnify, defend and hold the LFUCG harmless from all penalties, fines or other expenses arising out of the alleged violation of said laws.

2. Failure to submit ALL forms and information required in this RFP may be grounds for disqualification.
3. Addenda: All addenda, if any, shall be considered in making the proposal, and such addenda shall be made a part of this RFP. Before submitting a proposal, it is incumbent upon each proposer to be informed as to whether any addenda have been issued, and the failure to cover in the bid any such addenda may result in disqualification of that proposal.
4. Proposal Reservations: LFUCG reserves the right to reject any or all proposals, to award in whole or part, and to waive minor immaterial defects in proposals. LFUCG may consider any alternative proposal that meets its basic needs.
5. Liability: LFUCG is not responsible for any cost incurred by a Respondent in the preparation of proposals.
6. Changes/Alterations: Respondent may change or withdraw a proposal at any time prior to the opening; however, no oral modifications will be allowed. Only letters, or other formal written requests for modifications or corrections of a previously submitted proposal which is addressed in the same manner as the proposal, and received by LFUCG prior to the scheduled closing time for receipt of proposals, will be accepted. The proposal, when opened, will then be corrected in accordance with such written request(s), provided that the written request is contained in a sealed envelope which is plainly marked "modifications of proposal".
7. Clarification of Submittal: LFUCG reserves the right to obtain clarification of any point in a bid or to obtain additional information from a Respondent.
8. Bribery Clause: By his/her signature on the bid, Respondent certifies that no employee of his/hers, any affiliate or Subcontractor, has bribed or attempted to bribe an officer or employee of the LFUCG.

9. **Additional Information:** While not necessary, the Respondent may include any product brochures, software documentation, sample reports, or other documentation that may assist LFUCG in better understanding and evaluating the Respondent's response. Additional documentation shall not serve as a substitute for other documentation which is required by this RFP to be submitted with the proposal,
10. **Ambiguity, Conflict or other Errors in RFP:** If a Respondent discovers any ambiguity, conflict, discrepancy, omission or other error in the RFP, it shall immediately notify LFUCG of such error in writing and request modification or clarification of the document if allowable by the LFUCG.
11. **Agreement to Bid Terms:** In submitting this proposal, the Respondent agrees that it has carefully examined the specifications and all provisions relating to the work to be done attached hereto and made part of this proposal. By acceptance of a Contract under this RFP, proposer states that it understands the meaning, intent and requirements of the RFP and agrees to the same. The successful Respondent shall warrant that it is familiar with and understands all provisions herein and shall warrant that it can comply with them. No additional compensation to Respondent shall be authorized for services or expenses reasonably covered under these provisions that the proposer omits from its Proposal.
12. **Cancellation:** If the services to be performed hereunder by the Respondent are not performed in an acceptable manner to the LFUCG, the LFUCG may cancel this contract for cause by providing written notice to the proposer, giving at least thirty (30) days notice of the proposed cancellation and the reasons for same. During that time period, the proposer may seek to bring the performance of services hereunder to a level that is acceptable to the LFUCG, and the LFUCG may rescind the cancellation if such action is in its best interest.

A. Termination for Cause

- (1) LFUCG may terminate a contract because of the contractor's failure to perform its contractual duties
- (2) If a contractor is determined to be in default, LFUCG shall notify the contractor of the determination in writing, and may include a specified date by which the contractor shall cure the identified deficiencies. LFUCG may proceed with termination if the contractor fails to cure the deficiencies within the specified time.
- (3) A default in performance by a contractor for which a contract may be terminated shall include, but shall not necessarily be limited to:
 - (a) Failure to perform the contract according to its terms,

- conditions and specifications;
- (b) Failure to make delivery within the time specified or according to a delivery schedule fixed by the contract;
 - (c) Late payment or nonpayment of bills for labor, materials, supplies, or equipment furnished in connection with a contract for construction services as evidenced by mechanics' liens filed pursuant to the provisions of KRS Chapter 376, or letters of indebtedness received from creditors by the purchasing agency;
 - (d) Failure to diligently advance the work under a contract for construction services;
 - (e) The filing of a bankruptcy petition by or against the contractor; or
 - (f) Actions that endanger the health, safety or welfare of the LFUCG or its citizens.

B. At Will Termination

Notwithstanding the above provisions, the LFUCG may terminate this contract at will in accordance with the law upon providing thirty (30) days written notice of that intent, Payment for services or goods received prior to termination shall be made by the LFUCG provided these goods or services were provided in a manner acceptable to the LFUCG. Payment for those goods and services shall not be unreasonably withheld.

- 13. **Assignment of Contract:** The contractor shall not assign or subcontract any portion of the Contract without the express written consent of LFUCG. Any purported assignment or subcontract in violation hereof shall be void. It is expressly acknowledged that LFUCG shall never be required or obligated to consent to any request for assignment or subcontract; and further that such refusal to consent can be for any or no reason, fully within the sole discretion of LFUCG.
- 14. **No Waiver:** No failure or delay by LFUCG in exercising any right, remedy, power or privilege hereunder, nor any single or partial exercise thereof, nor the exercise of any other right, remedy, power or privilege shall operate as a waiver hereof or thereof. No failure or delay by LFUCG in exercising any right, remedy, power or privilege under or in respect of this Contract shall affect the rights, remedies, powers or privileges of LFUCG hereunder or shall operate as a waiver thereof.
- 15. **Authority to do Business:** The Respondent must be a duly organized and authorized to do business under the laws of Kentucky. Respondent must be in good standing and have full legal capacity to provide the services specified under this Contract. The Respondent must have all necessary right and lawful authority to enter into this Contract for the full term hereof and that proper corporate or other action has been duly taken authorizing the Respondent to enter into this

Contract. The Respondent will provide LFUCG with a copy of a corporate resolution authorizing this action and a letter from an attorney confirming that the proposer is authorized to do business in the State of Kentucky if requested. All proposals must be signed by a duly authorized officer, agent or employee of the Respondent.

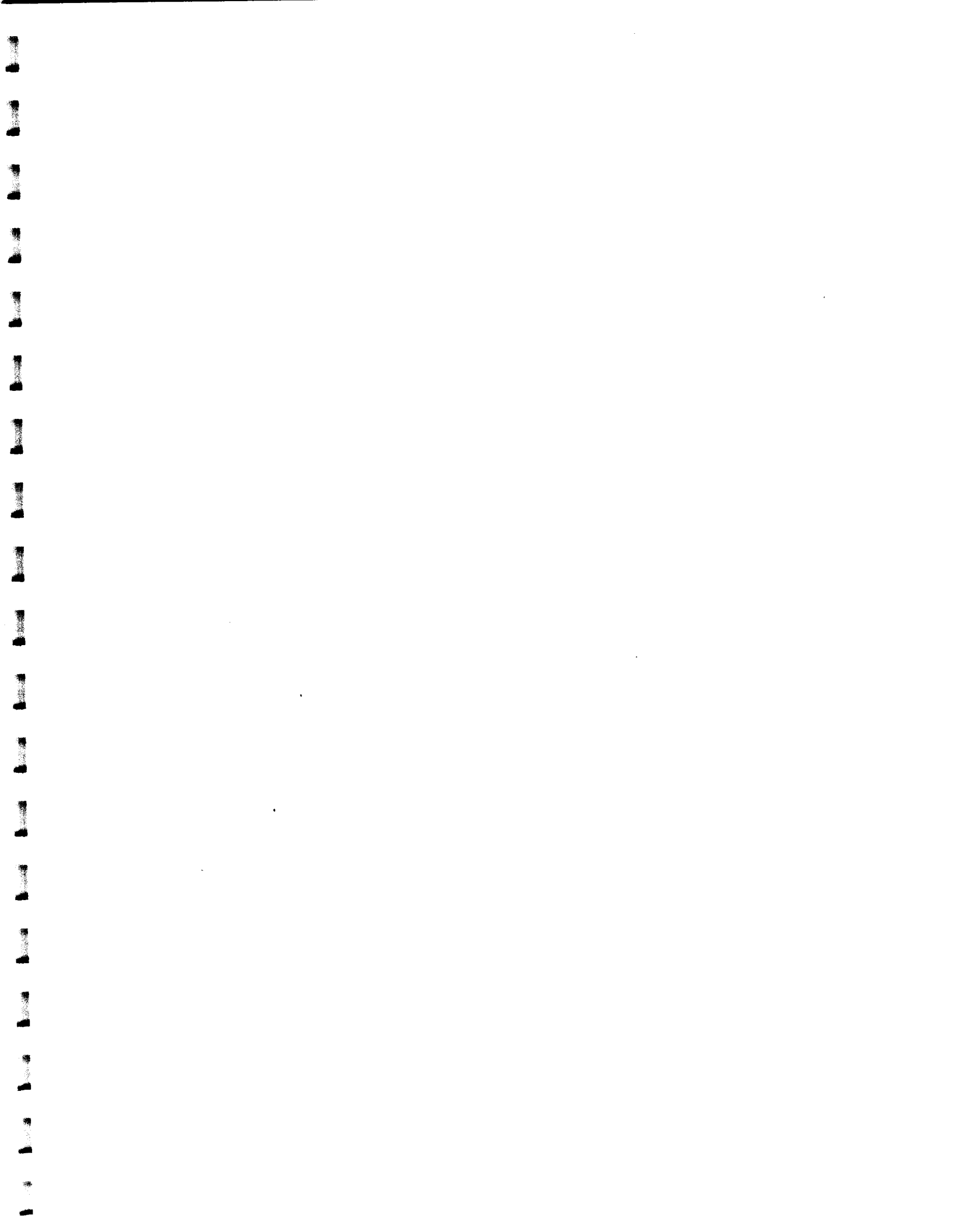
16. **Governing Law:** This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky. In the event of any proceedings regarding this Contract, the Parties agree that the venue shall be the Fayette County Circuit Court or the U.S. District Court for the Eastern District of Kentucky, Lexington Division. All parties expressly consent to personal jurisdiction and venue in such Court for the limited and sole purpose of proceedings relating to this Contract or any rights or obligations arising thereunder. Service of process may be accomplished by following the procedures prescribed by law.
17. **Ability to Meet Obligations:** Respondent affirmatively states that there are no actions, suits or proceedings of any kind pending against Respondent or, to the knowledge of the Respondent, threatened against the Respondent before or by any court, governmental body or agency or other tribunal or authority which would, if adversely determined, have a materially adverse effect on the authority or ability of Respondent to perform its obligations under this Contract, or which question the legality, validity or enforceability hereof or thereof.
18. Contractor understands and agrees that its employees, agents, or subcontractors are not employees of LFUCG for any purpose whatsoever. Contractor is an independent contractor at all times during the performance of the services specified.
19. If any term or provision of this Contract shall be found to be illegal or unenforceable, the remainder of the contract shall remain in full force and such term or provision shall be deemed stricken.



Signature

10/27/17

Date



Hazen

Hazen and Sawyer
230 Lexington Green Circle, Suite 520 • Lexington, KY 40503

MAYOR JIM GRAY



LEXINGTON

CHARLES H. MARTIN, P.E.
DIRECTOR
WATER QUALITY

TO: Mayor Jim Gray
Urban County Council

FROM: 
Charles H. Martin, P.E., Director
Division of Water Quality

DATE: December 5th, 2017

SUBJECT: **Contract for Investigation/Design Services for West Hickman WWTP Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection; RFP #41-2017**

Request

The purpose of this memorandum is to request a resolution authorizing an agreement between the Lexington-Fayette Urban County Government (LFUCG) and Hazen and Sawyer. The contract with Hazen and Sawyer will provide investigation and design services for West Hickman WWTP Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection.

Purpose of Request

The purpose of the West Hickman WWTP Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection, as defined by RFP #41-2017, is to evaluate and design the structural repair needed for Clarifiers #7 and #8 at the West Hickman WWTP. After the design and advertisement for construction the consultant will also be responsible for inspection until construction is complete.

On November 20th, 2017 an RFP workgroup reviewed four RFPs for providing investigation and design services for the West Hickman WWTP Final Clarifiers #7 and #8 Structural Repair Design/Construction Inspection. The workgroup scored the firms as best meeting the conditions of the advertised Request for Proposals. The unanimous decision was Hazen and Sawyer for the project. Hazen and Sawyer's cost proposal was the second lowest but based on the scoring ranked #1 in meeting the qualifications.

Project Cost in FY18 and in Future Budget Years

The cost for the defined investigation, design services and construction administration for the base project is \$179,835.00

Are Funds Budgeted

Funds are fully budgeted in:
Base Project: 4002 303403 0001 91017

Martin/Hoskins-Squier

