THIRD AMENDMENT TO THE AGREEMENT BETWEEN CITY OF LEAGUE CITY AND CDM SMITH, INC.

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This Amendment No: 3 is made and entered into on the date set forth below to the Agreement between CDM Smith Inc. (CDM Smith) ("ENGINEER") and the City of League City Texas ("OWNER") dated June 16, 2011, ("the Agreement").

RECITALS

WHEREAS, ENGINEER and OWNER entered into the Agreement for the professional engineering design services for the 36-inch waterline from State HWY 3 Booster Pump Station to South Shore Harbour Booster Pump Station, and

WHEREAS, the parties desire to amend the Agreement to amend the scope of work, time periods of performance and payment, and/or responsibilities of OWNER; and

NOW THEREFORE, in consideration of the mutual understandings and Agreements contained herein, the parties agree to amend the Agreement as follows:

TERMS

- 1. The Basic Services of ENGINEER as described in the Agreement are amended and supplemented as follows: The tasks and time periods for performance associated with this Amendment No. 3 are outlined in Exhibits A through E, which are attached and incorporated herein.
- 2. The payment for services rendered by ENGINEER shall be as set forth below:

Payment will be on a lump sum basis based on percent complete of each task as outlined below. Supplemental Geotechnical Work - \$47,740.00 Supplement Survey Work -\$21,775 Total - \$69,515.00

The total lump sum not to exceed amount of this amendment is \$69,515.00.

3. Except as herein modified, all terms and conditions of the Agreement shall remain in full force and effect.

(signature blocks on next page)

IN WITNESS WHEREOF, the parties hereto have executed this amendment on the date indicated above for the purpose herein expressed.

Executed this ______ day of _____, 2020. (date to be filled in by City Secretary)

CDM SMITH INC.

Brent W. Nicholas, Vice President

CITY OF LEAGUE CITY

John Baumgartner, City Manager

ATTEST:

Diana Stapp, City Secretary

APPROVED AS TO FORM:

Nghiem V. Doan, City Attorney



Hago Westneimer Road, Suite 700 Houston, Texas 77077 tel: 713-423-7300 fax: 713-840-0173

April 20, 2020

Mr. Marcos Garcia, P.E. Senior Project Manager Project Management 300 W Walker St League City, TX 77573

Subject:City of League City, Texas
36-inch Waterline Project
Exhibit A: Amendment No. 3 Proposal: Geotechnical and Survey Services

Dear Mr. Garcia:

Based on the project design review meeting conducted on Thursday February 19, 2020 CDM Smith is providing this proposal for additional geotechnical work. As discussed in the referenced design review meeting sufficient geotechnical data was not provided in the original project geotechnical report completed in June 2015. Due to progression of the design and the need to horizontal direction drill a significant portion of the project the original geotechnical borings did not extend to the depth of the current designed horizontal direction drill profile, did not locate the optimum drilling soil profile window and did provide sufficient soil property data for drillers to sufficiently design and bid the drilling portion of the project. The proposal includes an additional 5 geotechnical borings to 100-foot depth to cover the 3 horizontal direction drilling sections of the project. As discussed CDM Smith is aware that Kinder Morgan pipeline company has also completed geotechnical work in the Clear Creek area for a recently installed pipeline under Clear Creek and that data could be utilized to supplement this project's need for additional geotechnical data. If the project team is successful in receiving approval from Kinder Morgan Pipeline Company to utilize the data only 3 geotechnical borings at 100-foot depth would be required.

Additionally, based on the City's request on February 25, 2020 CDM Smith is proving the included survey proposal for updated metes and bounds exhibits for the easements associated with the 36-inch waterline project, including temporary work area easements for horizontal direction drill one crossing Clear Creek. The survey proposal also includes the required field work to identify the Mean Lower Low Water (MLLW) tidal datum requested from the USACE in response to their updated permit review.

The tasks associated with this Amendment 3 request include the following:

Task 1: Supplement Geotechnical Work

Perform either 3 or 5 geotechnical test borings at 100-foot depth at locations along the alignment identified in Exhibit B to obtain additional geotechnical data for the design of the three horizontal directional drill pipeline segments. (3 borings if the project team can utilize the Kinder Morgan Pipeline Company geotechnical data.). The proposal assumes that if the Kinder Morgan Pipeline Company provides the geotechnical data

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Mr. Marcos Garcia, P.E. April 20, 2020 Page 2

> and allows the project team to utilize it for the purpose of this project that the City also agrees the we have the right to utilize this information for design purposes for this project.

- The proposal assumes the boring locations are not immediately accessible from a roadway and will require ATV-drill rig access. A CDM Smith representative will be onsite during drilling to log the boring and provide sampling direction to expedite information transfer to the design team and expedite finalization of the horizontal direction drill design.
- The proposal assumes that the Owner has access to the property to perform the borings and that the Owner will assist with any property access issues.
- The proposal assumes that CDM Smith and/or their drilling subcontractor will coordinate the proper one call requirements and any traffic control coordination required for the drilling rig. Any other permitting requirements for property access and drilling will be coordinated by the Owner.
- Geotechnical laboratory testing is to be performed on collected soil samples obtained from the borings and will include index and strength testing as well as swell testing.
- A supplemental geotechnical data memo will be developed that summarizes the field work performed and lab testing performed. This memo will be provided to supplement the existing geotechnical data set for the project.

Task 2: Supplement Survey Work

- Prepare updated temporary and permanent easement exhibits and metes and bounds descriptions for easement acquisition for the waterline route based on City provided title reports. Prepare a signed and sealed survey exhibit for CenterPoint permit approval for the waterline Genco Channel/CenterPoint easement crossing. Proposal includes up to 20 total easement exhibits.
- Perform required survey field work to identify the Mean Lower Low Water (MLLW) tidal datum at Clear Creek and provide required information in order to update the Clear Creek crossing plan and profile sheets and comply with the new USACE permit request.

By way of this proposal letter, CDM Smith is requesting a lump sum increase of \$69,515 to our Professional Services Contract to provide services for the added scope. The requested \$69,515.00 assumes that five geotechnical borings are required. If only three geotechnical borings are required, the budget required to complete the work is \$58,115.00. Level of effort estimates for both five and three geotechnical borings is attached with this letter as **Exhibit C** and a schedule for services

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Mr. Marcos Garcia, P.E. April 20, 2020 Page 3

associated with this amendment as **Exhibit D** for reference. Proposals from subcontractors are included as **Exhibit E**.

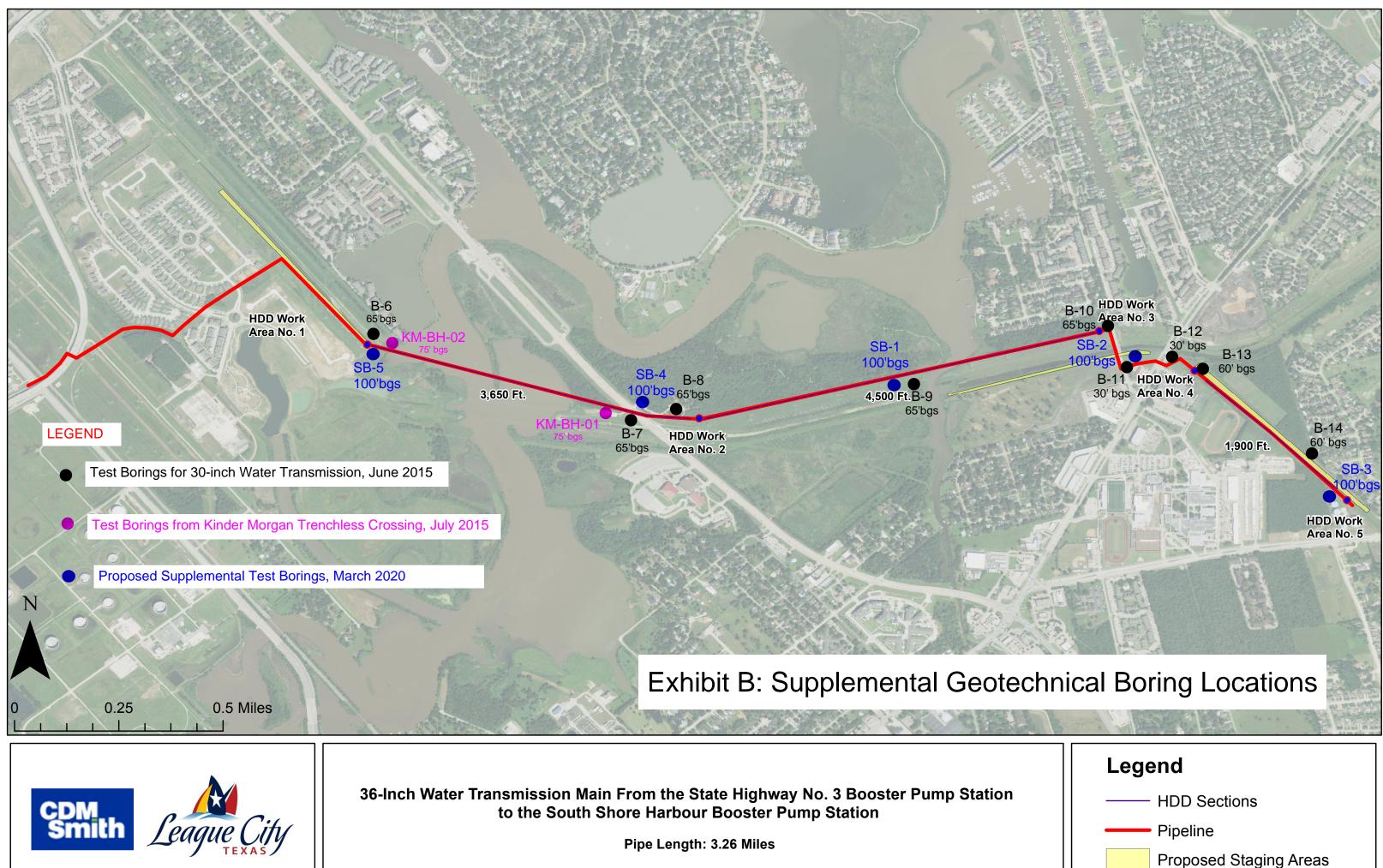
We look forward to working with the City to finalize this project. Should you have any questions on the enclosed documents, please feel free to contact us at any time.

Sincerely,

Remberg Chember

Kim Chanslor, P.E. Project Manager CDM Smith TBPE Registration No. F-3043

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| Areas |
|-------|
| |

Exhibit C: Detailed Hour and Cost Breakdown - 5 Borings

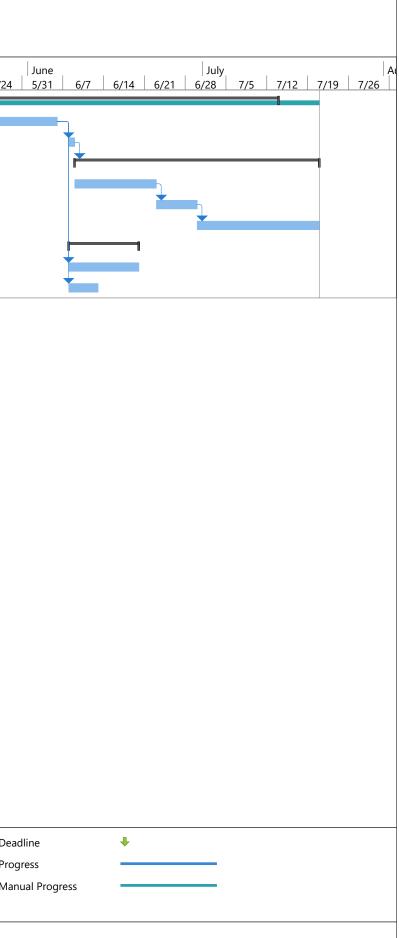
| | | | HDD ENG/Geotch | Geotech - Eng | Geotech - Eng Gr | Geotech - | Senior CAD | Contract | | 1 | | | | | |
|--------|---------------------------------------|-------------------|----------------|---------------|------------------|------------|------------|----------|---------------|-------|------------|-------------------------------|---------|------------|----------|
| | Role | e Senio PM / QAQC | ENG 7/8 | Gr 5/6 | 3/4 | Eng Gr 1/2 | Designer | Admin | Admin Support | | | | | | |
| | | | | | | | | | | Total | Labor Bill | | | | Task |
| Task | Name | Hours | | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Amount | Outside Prof (Incl 5% markup) | ODCs | Total Cost | Subtotal |
| Task 1 | Supplemental Geotechnical Work | | | | | | | | | | | | | | |
| | Development and Coordinate Field Plan | 4 | 0 | 2 | 8 | 0 | 0 | 0 | 0 | 14 | \$2,460 | \$0 | \$0 | \$2,460 | \$47,740 |
| | Drilling and Lab Work | 0 | 0 | 8 | 72 | 4 | 0 | 0 | 0 | 84 | \$12,760 | \$21,000 | \$2,700 | \$36,460 | \$47,740 |
| | Supplemental Geotechnical Memo | 8 | 10 | 8 | 12 | 4 | 0 | 2 | 6 | 50 | \$8,820 | \$0 | \$0 | \$8,820 | |
| Task 2 | Supplemental Survey Work | | | | | | | | | | | | | | |
| | Easement Exhibits | 10 | | 0 | 0 | 0 | 0 | 0 | 0 | 10 | \$2,310 | \$13,650 | \$0 | \$15,960 | \$21,775 |
| | USACE MLLW Tidal Datum | 4 | | 0 | 0 | 0 | 8 | 2 | 0 | 14 | \$2,140 | \$3,675 | \$0 | \$5,815 | |
| | TOTAL | . 26 | 10 | 18 | 92 | 8 | 8 | 4 | 6 | 172 | \$28,490 | \$38,325 | \$2,700 | \$69,515 | |

Exhibit C: Detailed Hour and Cost Breakdown - 3 Borings

| | | | | | | | | | 0- | | | | | | |
|--------|---------------------------------------|-----------------|----------------|---------------|------------------|------------|------------|----------|---------------|-------|------------|-------------------------------|---------|------------------|----------|
| | | | HDD ENG/Geotch | Geotech - Eng | Geotech - Eng Gr | Geotech - | Senior CAD | Contract | | | | | | | |
| | Role | Senio PM / QAQC | ENG 7/8 | Gr 5/6 | 3/4 | Eng Gr 1/2 | Designer | Admin | Admin Support | | | | | | |
| | | | | | | | | | | Total | Labor Bill | | | | Task |
| Task | Name | Hours | | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Amount | Outside Prof (Incl 5% markup) | ODCs | Total Cost | Subtotal |
| Task 1 | Supplemental Geotechnical Work | | | | | | | | | | | | | | |
| | Development and Coordinate Field Plan | 4 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 10 | \$1,860 | \$0 | \$0 | \$1,860 | \$36,340 |
| | Drilling and Lab Work | 0 | 0 | 8 | 52 | 4 | 0 | 0 | 0 | 64 | \$9,760 | \$13,650 | \$2,250 | \$25,660 | Ş30,340 |
| | Supplemental Geotechnical Memo | 8 | 10 | 8 | 12 | 4 | 0 | 2 | 6 | 50 | \$8,820 | \$0 | \$0 | \$8,820 | |
| Task 2 | Supplemental Survey Work | | | | | | | | | | | | | | |
| | Easement Exhibits | 10 | | 0 | 0 | 0 | 0 | 0 | 0 | 10 | \$2,310 | \$13,650 | \$0 | \$15,960 | \$21,775 |
| | USACE MLLW Tidal Datum | 4 | | 0 | 0 | 0 | 8 | 2 | 0 | 14 | \$2,140 | \$3,675 | \$0 | \$5 <i>,</i> 815 | |
| | TOTAL | 26 | 10 | 18 | 68 | 8 | 8 | 4 | 6 | 148 | \$24,890 | \$30,975 | \$2,250 | \$58,115 | |

| | | | | | Leag | Exhibit D ue City 36-inch Waterline - Amendment 3 Schedule |
|----|---|------------------------------------|----------|-------------|-------------|---|
| ID | 0 | Task Name | Duration | Start | Finish | April May 3/8 3/15 3/22 3/29 4/5 4/12 4/19 4/26 5/3 5/10 5/17 5/24 |
| 1 | | League City 36-inch WL Amendment 3 | 46 days | Mon 5/11/20 | Mon 7/13/20 | |
| 2 | | Amendment Finalization | 20 days | Mon 5/11/20 | Fri 6/5/20 | |
| 3 | | Notice to Proceed | 1 day | Mon 6/8/20 | Mon 6/8/20 | |
| 4 | | Supplement Geotechnical Work | 30 days | Tue 6/9/20 | Mon 7/20/20 | |
| 5 | | Field Preparatio/Coordination | 10 days | Tue 6/9/20 | Mon 6/22/20 | |
| 6 | | Drilling/Logging | 5 days | Tue 6/23/20 | Mon 6/29/20 | |
| 7 | | Supplemental Geotechnical Memo | 15 days | Tue 6/30/20 | Mon 7/20/20 | |
| 8 | | Supplemental Survey Work | 10 days | Mon 6/8/20 | Fri 6/19/20 | |
| 9 | | Easement Exhibit Preparation | 10 days | Mon 6/8/20 | Fri 6/19/20 | |
| 10 | | USACE Permit Request Field Work | 5 days | Mon 6/8/20 | Fri 6/12/20 | |

| | Task | | Project Summary | · · · · · · · · · · · · · · · · · · · | Manual Task | Start-only | C | Dea |
|-------------------------------|-----------|----|--------------------|---------------------------------------|-----------------------|--------------------|------------|------|
| Project: LC 36-inch WL Amendm | Split | | Inactive Task | | Duration-only | Finish-only | C | Prog |
| Date: Mon 4/20/20 | Milestone | • | Inactive Milestone | \diamond | Manual Summary Rollup | External Tasks | | Man |
| | Summary | II | Inactive Summary | [| Manual Summary | External Milestone | \diamond | |
| | | | | | Page 1 | | | |



SOUTH POINT SURVEYING, PLLC

LAND SURVEYING SERVICES



PROPOSAL LETTER

April 20, 2020

CDM Smith Kimberly Chanslor, P.E. 11490 Westheimer Road. Suit# 700 Houston, Texas 77077

Email: ChanslorKM@cdmsmith.com Phone: 713-423-7353

Re: League City 36" Waterline Additional Request

Dear Kim,

South Point Surveying appreciates the opportunity to submit this proposal to perform survey services.

SCOPE OF WORK

- 1. Each survey plat / exhibit will be a charge of \$650 per plat or exhibit (includes Metes & Bounds description) Assumed 20-plats
- 2. The MLLW datum linework applied to survey data submitted: \$3,500.

COMPENSATION

Estimated cost for all field and office work; a total lump sum of \$17,150.00.

AUTHORIZATION

To authorize the work please return the signed Agreement Letter.

We are looking forward to working with you on this project. If you have any questions or require additional information, please feel free to contact me at any time.

Sincerely

Josh McGinn, RPLS Owner / Operator

7717 JENKINS ROAD, PEARLAND, TX 77584 713-540-5101, WWW.SP-SURVEYING.COM TBPLS FIRM NO. 10194401





Proposal No. PHA19-13-00 April 2, 2020 3602 Westchase Houston, TX 77042

P 713.996.8990F 713.996.8993TBPE Firm F-3257

WWW.RKCI.COM

Mr. Jeffrey Van Pelt, P.E. – Sr. Geotechnical Engineer CDM Smith 12400 Coit Road, Suite 400 Dallas, TX 75251

Re: Proposal for Limited Geotechnical Engineering Services League, Texas

Dear Mr. Van Pelt:

On the basis of your email transmittal received by our office on April 1, 2020, **Raba Kistner Consultants, Inc. (RKCI)** is pleased to submit this proposal for Limited Geotechnical Engineering Services to CDM Smith (CLIENT) for the above-referenced project. The broad objectives of our study will be to conduct geotechnical borings at locations selected by CLIENT and to perform soils mechanics laboratory testing on selected recovered soil samples.

Work Scope

It is our understanding that **RKCI** is to assist CLIENT in conducting a geotechnical study for a project located in League City, Texas. **RKCI** is responsible for supplying an all-terrain drill rig to CLIENT, staking boring locations and making One Call notifications, and for performing geotechnical laboratory tests on selected recovered soil samples. We further understand that CLIENT will supply a representative to log and sample the borings, will assign soils mechanics laboratory tests for the recovered soil samples, and will deliver the soil samples and field logs to **RKCI's** laboratory located at 3602 Westchase Drive in Houston, Texas.

At the conclusion of laboratory testing, RKCI will prepare and submit borings logs to CLIENT.

Project Fee

The itemized cost breakdowns for conducting a 3 or 5 boring program are attached to this proposal. Additional services will be billed on a unit basis in accordance with our standard fees as indicated on the attached budget tables.

Historically, the cost of our field services is about 45 percent of our total fee. These services are predominantly provided by subcontractors. In order to promptly pay our subcontractors and continue to be able to respond to your needs, we will send you an interim invoice for 45 percent as soon as the field exploration phase of our study is complete.

Acceptance

We appreciate the opportunity of submitting this proposal and look forward to working with you in the development of this project, which will be carried out accordance with this letter and the following attachments:

Proposal No. PHA19-139-00 April 2, 2020

| <u>Attachment</u> | Description |
|-------------------|-----------------------------------|
| | Standard Terms and Conditions |
| | Budget Table for 3 Boring Program |
| | Budget Table for 5 Boring Program |

Please return one signed original of this contract to provide written authorization for our firm to commence work on the services outlined herein. Our invoices are due and payable upon receipt at P.O. Box 971037, Dallas, Dallas County, Texas 75397-1037.

RKCI considers the data and information contained in this proposal to be proprietary. This statement of qualifications and any information contained herein shall not be disclosed and shall not be duplicated or used in whole or in part for any purpose other than to evaluate this proposal.

Very Truly Yours: RABA KISTNER CONSULTANTS, INC.

John D. Braun

John D. Brown, P.E. Manager, Geotechnical Services

Accepted By _____

(Typed or Printed Name)

(Signature)

(Title)

Date: _____

JDB/dar



STANDARD TERMS AND CONDITIONS

- <u>SERVICES.</u> Raba Kistner, Inc., by and through one of its subsidiaries (Raba Kistner Consultants, Inc., Raba Kistner Environmental, Inc., Raba Kistner Facilities, Inc. or Raba Kistner Infrastructure, Inc.) (the relevant subsidiary, being engaged to provide the services to CLIENT in connection with the delivery of this instrument, is referred to as "RK" herein) is being engaged by the CLIENT to render professional services ("Services") involving only RK's advice, judgment and opinion. RK may subcontract all or a portion of the Services performed hereunder. RK shall apply professional judgment in determining the extent to which RK complies with any given standard identified in RK's instruments of professional services. CLIENT expressly acknowledges that RK makes no warranties or guarantees, expressed or implied, regarding the Services.
- INFORMATION PROVIDED BY CLIENT. CLIENT may provide or 2. direct RK to utilize or rely upon certain information ("CLIENT Information") in the performance of RK's services. RK shall be entitled to rely upon such CLIENT Information. RK will not conduct an independent evaluation of the accuracy or completeness of such CLIENT Information and shall not be responsible for any errors or omissions in such information. . RK's report, as well as any recommendations, findings, and conclusions made by RK, are dependent on information received from CLIENT. Changes or modifications to the information provided by CLIENT can affect RK's evaluation, recommendations, findings and conclusions, and CLIENT agrees—as a material term of this Agreement—to notify RK immediately, in writing, if CLIENT becomes aware of any such changes or modifications, including changes to the size, scope, location, or other material characteristics of CLIENT's project. The CLIENT shall be responsible for providing the location of all underground utilities and other structures in the vicinity of RK borings or excavations. RK will not accept responsibility and will not be liable for affecting or damaging any underground utility, underground storage tank, or other subsurface condition not previously identified and located, or improperly located, by the CLIENT, a utility, or a utility locating agency.
- 3. <u>SITE ACCESS AND SITE SAFETY</u>. CLIENT shall provide right-ofentry to the buildings and sites which are the subjects of RK's services. CLIENT represents that it possesses authority for such right-of-entry and that the building/site operator(s) possess the necessary permits and licenses for current activities at the site. RK shall be responsible for supervision and site safety measures of its own employees and subconsultants, but shall not be responsible for the supervision or health and safety precautions of any other parties, including CLIENT, CLIENT'S contractors, subcontractors, or other parties present at the site.
- 4. <u>SUBSURFACE EXPLORATIONS.</u> Subsurface conditions throughout the site may vary from those depicted on logs of discrete borings, test pits, or other exploratory services. CLIENT understands RK's layout of boring and test locations is approximate and that RK may deviate a reasonable distance from those locations. RK will take reasonable precautions to reduce damage to the site when performing services; however, CLIENT accepts that invasive services such as drilling or sampling may damage or alter the site. Site restoration is not provided unless specifically included in the scope of services.
- CHANGED CONDITIONS. If, during the term of this Agreement, circumstances or conditions that were not originally contemplated by or known to RK are uncovered or revealed, to the extent that they affect the scope of services, compensation, schedule, allocation of

risks or other material terms of this Agreement, RK may call for renegotiation of appropriate portions of this Agreement. RK shall notify the CLIENT of the changed conditions necessitating renegotiation, and RK and the CLIENT shall promptly and in good faith enter into renegotiation of this Agreement to address the changed conditions. If changes cannot be agreed to with respect to changed conditions, the parties shall utilize the Dispute Resolution/Litigation procedures in this Agreement.

- TESTING AND OBSERVATIONS. CLIENT understands that 6. testing and observation are discrete sampling procedures, and that such procedures indicate conditions only at the depths, locations, and times the procedures were performed. RK will provide test results and opinions based on tests and field observations only for the work tested. CLIENT understands that testing and observation are not continuous or exhaustive, and are conducted to reduce - not eliminate - project risk. CLIENT agrees to the level or amount of testing performed and the associated risk. CLIENT is responsible (even if delegated to contractor) for notifying and scheduling RK so RK can perform these services. RK shall not be responsible for the quality and completeness of contractor's work or their adherence to the project documents, and RK's performance of testing and observation services shall not relieve contractor in any way from its responsibility for defects discovered in its work, or create a warranty or guarantee. CLIENT acknowledges that RK will not supervise or direct the work performed by contractor or its subcontractors and is not responsible for their means and methods.
- ESTIMATE OF FEES FOR CONSTRUCTION AND MATERIALS 7. TESTING SERVICES. If included as part of RK's proposal, RK will, to the best of its ability, perform the scope of services related to Construction and Materials Testing Services within the proposed fee estimate provided by RK. RK's proposal fees are based upon an estimate of the services required to meet the specifications for the project and following generally accepted engineering practices. The CLIENT recognizes that unforeseen circumstances along with changes in scope and project/contractor's schedules can influence the successful completion of the scope of services within the estimated proposed fees. Because the contractor has sole control over the project and determines the means and methods used to build/construct the project, RK's service fees are estimates and not lump sum or guaranteed maximum fees. The CLIENT is fully responsible for payment of all services provided, including retests of contractor's failed areas.
- 8. <u>REPORTS.</u> RK may provide CLIENT with written reports in connection with the Services performed. Such reports will present such findings and conclusions as RK may reasonably make with the information gathered while performing its services, and provided by CLIENT. The reports may be copied for inclusion in other documents related to the project provided it is reproduced in its entirety; however reports and other instruments of service are prepared for, and made available for, the sole use of the CLIENT, and the contents thereof may not be used or relied upon by others without the express written authorization of RK. Any unauthorized use or distribution shall be at the CLIENT's sole risk and without liability to RK..
- 9. TOXIC AND HAZARDOUS MATERIALS. CLIENT shall provide RK with all information within CLIENT'S possession or knowledge as to the potential or presence of toxic or hazardous materials or pollutants at the site. CLIENT agrees that RK neither created nor contributed to the creation or existence of any toxic or hazardous materials or pollutants. In no event shall RK be required to sign a

hazardous waste manifest or take ownership of any toxic or hazardous materials or pollutants. If unanticipated toxic or hazardous materials or pollutants are encountered while performing RK's services, RK reserves the right to stop field operations and notify the CLIENT and CLIENT assumes responsibility to notify appropriate regulatory agencies. RK and CLIENT must mutually agree to remobilize.

- 10. NO THIRD-PARTY BENEFICIARIES. The services and any report(s) prepared under this Agreement are for the sole benefit and sole use of CLIENT and are not for the use of any other party or person. Only CLIENT may rely upon the services and any report or work product. Nothing in this Agreement, or any subsequent amendments or modifications, or in any report issued under this Agreement, shall create a contractual relationship with or a cause of action in the favor of any third party against either RK or CLIENT. If CLIENT provides a copy of any report prepared by RK to others, it shall advise the recipient that the information contained in the report is provided for information only and is not to be relied upon by third parties.
- 11. <u>LEED PROJECTS.</u> Unless specifically addressed elsewhere in this agreement, RK has no responsibility or liability, including duty to defend or duty to indemnify, any party (including but not limited to CLIENT, owner, owner's agents, architects, engineers, contractors, construction managers, subcontractors) for the LEED certification process including: developing, producing, or retaining any documentation relating to the calculation of LEED points; and attainment of LEED certification points or LEED ratings.
- 12. <u>STANDARD OF CARE.</u> RK shall perform its professional services in accordance with the standard of care and diligence normally practiced by professional firms in performing services of a similar nature, in the same locality, under similar circumstances. CLIENT expressly acknowledges that RK makes no other warranties or guarantees, expressed or implied, regarding its professional services or its work product.
- <u>RISK ALLOCATION.</u> RK will be responsible only for its own work, and that of its sub-consultants, and not for defects in the work designed or built by others.
- 14. LIMITATION OF LIABILITY. CLIENT AND RK HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING RK'S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE RISKS SO, TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF RK (AND ITS RELATED ENTITIES, EMPLOYEES, OWNERS, AGENTS, AND REPRESENTATIVES) TO CLIENT (AND THIRD PARTIES GRANTED RELIANCE ON RK'S WORK PRODUCT, OR OTHERWISE SEEKING RECOVERY UNDER THIS AGREEMENT) IS LIMITED TO THE GREATER OF \$100,000 OR THE FEE PAID RK UNDER THIS AGREEMENT, FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF RK'S SERVICES OR THIS AGREEMENT REGARDLESS OF CAUSE(S) OR THE THEORY OF LIABILITY,
- 15. <u>CONSEQUENTIAL DAMAGES.</u> Neither CLIENT nor RK will be liable to the other for any special, consequential, indirect, incidental or penal losses or damages of any kind, nor will CLIENT or RK be liable to the other for losses, damages, or claims, regardless of how defined, related to: lost profits; unavailability of property or facilities; shutdowns or service interruptions; loss of use, , revenue, opportunity, or inventory; use charges, carrying costs, cost of substitute facilities, goods, or services; cost of capital, or claims of any other party and/or its customers.
- 16. <u>SUSPENSION OF SERVICES.</u> If the CLIENT fails to make payments when due or otherwise is in breach of this Agreement, RK may suspend performance of services upon seven (7) calendar days' notice to the CLIENT. RK shall have no liability whatsoever to the CLIENT for any costs or damages as a result of such suspension. Upon payment in full by the CLIENT, RK may resume

services under this Agreement, and the time schedule and compensation shall be equitably adjusted to compensate for the period of suspension plus any other reasonable time and expense necessary for RK to resume performance. Payment of invoices shall not be subject to any discounts or set-offs by the CLIENT unless agreed to in writing by RK. Payment to RK for services rendered and expenses incurred will be due and payable regardless of any subsequent suspension or termination of this Agreement by either party.

- WAIVER OF SUBROGATION. To the extent damages are covered 17. by property insurance, or any other available insurance coverage, CLIENT and RK waive all rights against each other and against the contractors, consultants, agents and employees of the other for damages. CLIENT agrees that CLIENT shall procure, or cause to be procured builder's risk insurance or other property insurance for its project. RK and CLIENT waive all rights against each other and any of their consultants, contractors, subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, flood, or other causes of loss to the extent covered by CLIENT's or CLIENT's Contractor's builder's risk insurance, or other available The policies shall provide waivers of insurance coverage. subrogation by endorsement or otherwise. CLIENT shall require of its contractors, consultants, agents and employees similar waivers in favor of RK and its subconsultants. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.
- 18. <u>OWNERSHIP OF DOCUMENTS.</u> R-K's reports, drawings, plans, specifications, and other documents and deliverables are instruments of professional service ("Instruments of Service") developed by RK in contemplation of a wide array of project-specific variables, including how the documents will be used and by whom. RK shall be the author, owner and custodian of the Instruments of Service, and shall retain all common law, statutory, and other reserved rights, including copyright. By execution of this Agreement, RK grants to CLIENT a limited, nonexclusive license to use the Instruments of Service for purposes of constructing, using, and maintaining the project for which the services are performed, provided CLIENT substantially performs its obligations, including prompt payment of all sums when due, under this agreement.

Upon completion of the services, and payment in full of all monies due RK, CLIENT may retain copies of all such documents. THE INSTRUMENTS OF SERVICE ARE NOT INTENDED NOR REPRESENTED TO BE SUITABLE FOR REUSE ON EXTENSIONS, MODIFICATIONS, OR ADAPTATIONS OF THE PROJECT, OR ANY OTHER PROJECT, ANY REUSE OF SUCH DOCUMENTS, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY RK FOR THE SPECIFIC PURPOSE INTENDED, WILL BE AT CLIENT'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO RK, AND CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY, DEFEND, AND HOLD HARMLESS RK, ITS OFFICERS, DIRECTORS, EMPLOYEES, AND CONSULTANTS AGAINST ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES (INCLUDING REASONABLE ATTORNEYS' FEES, DEFENSE COSTS, AND COURT COSTS) ARISING FROM OR ALLEGEDLY ARISING FROM OR IN ANY WAY CONNECTED WITH THE UNAUTHORIZED REUSE OR MODIFICATION OF THE DOCUMENTS BY CLIENT OR ANY PERSON OR ENTITY THAT ACQUIRES OR OBTAINS THE DOCUMENTS FROM OR THROUGH THE CLIENT WITHOUT THE WRITTEN AUTHORIZATION OF R-K REGARDLESS OF WHETHER SUCH CLAIMS, DEMANDS, OR ACTIONS ARE FOUNDED IN WHOLE OR IN PART UPON ALLEGED NEGLIGENCE OF RK, ITS OFFICERS, DIRECTORS, EMPLOYEES, OR CONSULTANTS.

Parties other than CLIENT and RK may apply to use an instrument, using a form prepared by RK for that purpose. Others' use of an instrument shall be permitted only when CLIENT and RK both so agree; either shall have the right to forbid use by others. In addition, R-K shall make its permission contingent upon the satisfaction of

> Page 2 of 3 ADM100 07/31/2013

certain conditions when, in RK's professional judgment, such a contingency is necessary.

- DISPUTE RESOLUTION/LITIGATION. All claims, disputes, and other controversy between RK and CLIENT arising out of or in any 19 way related to the services provided by RK shall be submitted to mediation, before and as a condition precedent to other remedies provided by law. If a dispute at law arises related to these services and that dispute requires litigation as provided above, the CLIENT assents to personal jurisdiction in the State of Texas; the claim will be brought and tried in Bexar County, the county where RK's principal place of business is located, and CLIENT waives the right to remove or transfer the action to any other county or jurisdiction. The prevailing party will be entitled to recovery of all court costs, attorneys' fees, and other legally recoverable claim-related expenses. As a condition precedent to mediation of any claim arising out of the services provided under this Agreement, CLIENT shall obtain the written opinion from a registered, independent, and reputable professional engineer that RK has violated the standard of care applicable to RK's performance of services, in a form that meets the requirements of Texas Civil Practice & Remedies Code Chapter 150.
- TERMINATION OF CONTRACT. CLIENT and RK may terminate services at any time upon ten (10) calendar days' written notice. In the event of termination, CLIENT agrees to fully compensate RK for services performed including reimbursable expenses through the termination date, as well as reasonable demobilization expenses. RK will terminate services without waiving any claims or incurring any liability.
- 21. <u>STATUTE OF LIMITATIONS.</u> Any applicable statute of limitations will commence to run and any cause of action shall be deemed to have accrued not later than the earlier of the following: (1) the date of the report issued by RK giving rise to the cause of action; (2) the date on which RK issues its last report under this Agreement; or (3) if RK is retained to perform construction observation, the date of substantial completion of the project.
- 22. FORCE MAJEURE. Neither party shall be liable in damages or have the right to terminate this Agreement for any delay or default in performing hereunder if such delay or default is caused by conditions beyond its control ("Force Majeure") including, but not limited to Acts of God, Government restrictions (including the denial or cancellation of any export or other necessary license), wars, insurrections and/or any other cause beyond the reasonable control of the party whose performance is affected. Force Majeure may not be claimed as a cause for delay in payment of money due and payable hereunder.
- <u>NO ASSIGNMENT</u>. Neither RK nor CLIENT shall assign, sublet, or transfer its interest in this Agreement without the express written consent of the other.
- 24. <u>SEVERABILITY.</u> Each provision of this Agreement is intended to be severable. If any terms or provisions of this agreement shall be held to be invalid, illegal, or unenforceable for any reason whatsoever, the validity, legality, and enforceability of the remaining provisions hereof shall remain in full force and effect and shall not in any way be affected or impaired thereby. Moreover, to the maximum extent allowed by law, the Parties hereto stipulate that any offending provisions will be modified or altered, as necessary, so as to give such provision the maximum permissible effect and application intended.
- 25. <u>ENTIRE AGREEMENT.</u> This Agreement, and all of its attachments, constitutes the entire, integrated Agreement between the Parties to it, and this Agreement supersedes all other Agreements, oral or written between the Parties, concerning the subject set forth in this Agreement. This Agreement may not be amended except in writing, with that amendment being signed by both Parties.

| ESTIMA | TE WORKSHEET FOR: League City | Drilling | | | | | - | |
|--|---|-----------------|--|---|-----------|--|---|--------|
| Date: | Thursday, November 14, 2019 | | | | | | - | |
| TO: | CDM Smith | PROPOSAL NO.: | PHA19-13 | 39-00 | | | | |
| | | PHONE: | | | FAX: | | - | |
| | | | Number | Depth | Soil | Rock | Soil | |
| | | Land - ATV Rig | 3 | 100 | 100 | 0 | 300 | |
| | | Clear Creek | 5 | 100 | 100 | 0 | 0 | |
| ATTN: | Jeffrey Van Pelt | | | | | 0 | 0 | |
| | | | | | | 0 | 0 | |
| | | | | | | 0 | 0 0 | |
| | | Totals | 3 | 100 | 100 | 0 | 300 | |
| | | | • | • | • | • | | |
| | PERATIONS tion of ATV/ Big | QUANTITY |) miles | UNIT PRICE \$4.50 | | <u>TOTAL</u> \$198.00 | | |
| | tion of ATV Rig mob of Pontoon | 4(| l.s. | \$4.50 \$1,200.00 | | \$198.00 | | |
| | Sampling (0'-50') | 150 | <u> </u> | \$10.00 | | | | |
| Drilling/S | Sampling (51'-100') | |) I.f. | \$12.00 | | | | |
| Grout | | | <u>)</u> l.f. | \$5.00 | | | | |
| Crew Su Crew Lo | •• | 2 | day day | \$75.00 \$300.00 | | \$330.00 \$0.00 | - | |
| | Day Rate | | _uay day | \$3,600.00 | | | | |
| Suport B | | | day | \$450.00 | | | - | |
| | rge (RKCI's), one trip | |) miles | \$1.00 | | \$80.00 | - | |
| | ation and Permit Applications | | hrs. | \$82.00 | | \$328.00 | | |
| Boring L Logger | ayout & Travel Time (RKCI-Geologist) RKCI - tech | 8 | <u>}</u> hrs. hrs. | \$82.00 \$54.00 | | \$656.00 \$0.00 | | |
| Standby | | | hrs. | \$225.00 | | φ0.00 | Total | |
| | | | _ | Operations | Subtotal: | \$6,872.00 | | 59.28% |
| | ATORY TESTS | QUANTITY | | UNIT PRICE | - | TOTAL | | |
| | g Limits (PI) | | 2 ea. | \$62.00 | | \$744.00 | | |
| Sieve Ar | | | ea. | \$57.00 | | \$0.00 | | |
| Unconfir | ed Compres. | 2 | ea. | \$45.00 | | \$180.00 | _ | |
| Percent | | | | ψ-0.00 | | φ100.00 | - | |
| | passing #200 sieve | | ea. | \$48.00 | | \$0.00 | | |
| | Content | 12 | ea. | \$48.00 \$9.00 | | \$0.00 \$108.00 | - | |
| Californi | | 12 | <u>ea.</u> ea. | \$48.00 \$9.00 \$800.00 | | \$0.00 \$108.00 \$0.00 | - | |
| | Content a Bearing Ratio | 12 | 2 ea. _ea. _ea. | \$48.00 \$9.00 \$800.00 \$204.00 | | \$0.00 \$108.00 | - - - - | |
| Californi Proctor | Content a Bearing Ratio pility | 12 | <u>ea.</u> ea. | \$48.00 \$9.00 \$800.00 | | \$0.00 \$108.00 \$0.00 \$0.00 | - - - - | |
| California Proctor Permeat Lime Se Sulfate (| Content a Bearing Ratio bility ries Content | | ea. _ea. _ea. _ea. _ea. _ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$840.00 \$250.00 \$83.00 | | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 | - | |
| California Proctor Permeat Lime Se Sulfate C Corrosiv | Content a Bearing Ratio bility ries Content ity Test | | 2 ea. ea. ea. ea. ea. ea. 3 ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$840.00 \$250.00 \$83.00 \$150.00 | | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 | - | |
| California Proctor Permeat Lime Se Sulfate C Corrosiv Consolid | Content a Bearing Ratio pility ries Content ity Test lation with Hyteresis Loop | | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$840.00 \$250.00 \$83.00 \$150.00 \$361.00 | | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$0.00 | - | |
| California Proctor Permeat Lime Se Sulfate C Corrosiv Consolic Triaxial U | Content a Bearing Ratio bility ries Content ity Test | | 2 ea. ea. ea. ea. ea. ea. 3 ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$840.00 \$250.00 \$83.00 \$150.00 | | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 | - | |
| California Proctor Permeat Lime Se Sulfate C Corrosiv Consolic Triaxial C Direct St | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) | | 2 ea. ea. ea. ea. ea. 3 ea. 6 ea. 5 ea. | \$48.00 \$9.00 \$204.00 \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 \$1,200.00 \$235.00 | | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 | - | |
| Californii Proctor Permeat Lime Se Sulfate (Corrosiv Consolic Triaxial (Direct St Direct St | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) | | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$204.00 \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 \$1,200.00 \$235.00 \$497.00 | | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$0.00 \$0.00 | - | |
| Californii Proctor Permeat Lime Se Sulfate (Corrosiv Consolic Triaxial (Triaxial (Direct SI Direct SI Swell Te | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell | | 2 ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$204.00 \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 \$1,200.00 \$235.00 \$497.00 \$292.00 | | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$0.00 \$0.00 \$584.00 | - | |
| California Proctor Permeat Lime Se Sulfate (Corrosiv Consolid Triaxial (Direct SI Direct SI Swell Te | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) | | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$204.00 \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 \$1,200.00 \$235.00 \$497.00 | | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$0.00 \$0.00 | - | |
| Californii Proctor Permeat Lime Se Sulfate (Corrosiv Consolic Triaxial (Triaxial (Direct SI Direct SI Swell Te | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell | | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$204.00 \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 \$1,200.00 \$235.00 \$497.00 \$292.00 | | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$0.00 \$0.00 \$584.00 | - | 34.33% |
| Californii Proctor Permeat Lime Se Sulfate C Corrosiv Consolic Triaxial C Triaxial C Direct Sł Direct Sł Swell Te Sieve Ar | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) DU (multi-stage) hear (JU) hear (CD) st - Free Swell halysis w/ Hydrometer | | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$204.00 \$250.00 \$83.00 \$150.00 \$361.00 \$1,200.00 \$235.00 \$497.00 \$292.00 \$128.00 | Subtotal: | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$0.00 \$584.00 \$1,536.00 \$3,980.00 | - | 34.33% |
| Californii Proctor Permeat Lime Se Sulfate C Corrosiv Consolic Triaxial C Direct SI Direct SI Swell Te Sieve Ar | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell | | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$204.00 \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 \$1,200.00 \$235.00 \$497.00 \$292.00 \$128.00 | Subtotal: | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$378.00 \$0.00 \$0.00 \$584.00 \$1,536.00 | - | 34.33% |
| California Proctor Permeat Lime Se Sulfate C Corrosiv Consolid Triaxial C Triaxial C Direct SH Direct SH Swell Te Sieve Ar PROCES Sr. Geot | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (JU) hear (CD) st - Free Swell halysis w/ Hydrometer | | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$840.00 \$250.00 \$150.00 \$361.00 \$361.00 \$235.00 \$497.00 \$292.00 \$128.00 tory Testing \$ | Subtotal: | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$0.00 \$584.00 \$1,536.00 \$3,980.00 TOTAL | - - - - - - - - - - - - - | 34.33% |
| California Proctor Permeat Lime Se Sulfate C Corrosiv Consolid Triaxial C Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (JU) hear (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer | | 2 ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$840.00 \$250.00 \$361.00 \$361.00 \$361.00 \$235.00 \$497.00 \$292.00 \$128.00 tory Testing <u>UNIT PRICE</u> \$185.00 \$110.00 | Subtotal: | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$584.00 \$1,536.00 \$1,536.00 \$1,536.00 \$1,536.00 \$1,536.00 \$3,980.00 \$3,980.00 \$200.00 | - - - - - - - - - - - - - - | 34.33% |
| California Proctor Permeat Lime Se Sulfate C Corrosiv Consolid Triaxial C Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote Drafting | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer echnical Engineer | QUANTITY 0.5 | 2 ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$840.00 \$250.00 \$361.00 \$361.00 \$361.00 \$235.00 \$497.00 \$292.00 \$128.00 \$128.00 \$1185.00 \$110.00 \$100.00 \$54.00 | Subtotal: | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$0.00 \$584.00 \$1,536.00 \$1,536.00 \$1,536.00 \$1,536.00 \$3,980.00 \$3,980.00 \$3,980.00 \$3,200.00 \$200.00 | - - - - - - - - - - - - | 34.33% |
| California Proctor Permeat Lime Se Sulfate O Corrosiv Consolid Triaxial O Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote Drafting Secretar | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) cu (multi-stage) near (UU) near (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer echnical Engineer y/Word Processor | QUANTITY 0.5 | 2 ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$840.00 \$250.00 \$361.00 \$361.00 \$361.00 \$235.00 \$497.00 \$292.00 \$128.00 \$128.00 \$1185.00 \$110.00 \$100.00 \$54.00 \$62.00 | Subtotal: | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$0.00 \$584.00 \$1,536.00 \$1,536.00 TOTAL \$92.50 \$0.00 \$200.00 \$324.00 | - - - - - - - - - - - - - - - - - - - | 34.33% |
| California Proctor Permeat Lime Se Sulfate O Corrosiv Consolid Triaxial O Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote Drafting Secretar | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer echnical Engineer | QUANTITY 0.5 | 2 ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$840.00 \$250.00 \$361.00 \$361.00 \$361.00 \$235.00 \$497.00 \$292.00 \$128.00 \$128.00 \$1185.00 \$110.00 \$100.00 \$54.00 | Subtotal: | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$0.00 \$584.00 \$1,536.00 \$1,536.00 \$1,536.00 \$1,536.00 \$3,980.00 \$3,980.00 \$3,980.00 \$3,200.00 \$200.00 | - - - - - - - - - - - - - - - - - - - | 34.33% |
| California Proctor Permeat Lime Se Sulfate O Corrosiv Consolid Triaxial O Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote Drafting Secretar | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) cu (multi-stage) near (UU) near (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer echnical Engineer y/Word Processor | QUANTITY 0.5 | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$840.00 \$250.00 \$361.00 \$361.00 \$361.00 \$235.00 \$497.00 \$292.00 \$128.00 \$128.00 \$1185.00 \$110.00 \$100.00 \$54.00 \$62.00 | Subtotal: | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$0.00 \$584.00 \$1,536.00 \$1,536.00 TOTAL \$92.50 \$0.00 \$200.00 \$324.00 | | 34.33% |
| California Proctor Permeat Lime Se Sulfate C Corrosiv Consolid Triaxial C Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote Drafting Secretar | Content a Bearing Ratio bility ries Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) cu (multi-stage) near (UU) near (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer echnical Engineer y/Word Processor | QUANTITY 0.5 | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$48.00 \$9.00 \$800.00 \$204.00 \$83.00 \$150.00 \$361.00 \$1,200.00 \$235.00 \$497.00 \$292.00 \$128.00 tory Testing UNIT PRICE \$185.00 \$110.00 \$100.00 \$54.00 \$250.00 | Subtotal: | \$0.00 \$108.00 \$0.00 \$0.00 \$0.00 \$0.00 \$450.00 \$378.00 \$0.00 \$0.00 \$584.00 \$1,536.00 \$1,536.00 107AL \$92.50 \$0.00 \$324.00 \$124.00 | | |

| Deter | TE WORKSHEET FOR: League City | Drilling | | | | | - | |
|---|---|------------------------|---|--|------------|---|---|--------|
| Date: | Wednesday, February 26, 2020 | | | | | | - | |
| TO: | CDM Smith | PROPOSAL NO.: | PHA19-13 | 9-00 | | | _ | |
| | | PHONE: | | | FAX: | | - 1 | |
| | | _ | Number | Depth | Soil | Rock | Soil | |
| | | Land - ATV Rig | 5 | 100 | 100 | 0 | 500 | |
| | | | | 100 | 100 | 0 | 0 | |
| ATTN: | Jeffrey Van Pelt | | | | | 0 | 0 | |
| | | | | | | 0 | 0 | |
| | | | + | + | | 0 | 0 0 | |
| | | Totals | 5 | 100 | 100 | 0 | 500 | |
| | | | | | _ | | | |
| - | PERATIONS tion of ATV Rig | QUANTITY |) miles | UNIT PRICE \$4.50 | 1.1 | <u>TOTAL</u> \$198.00 | | |
| | mob of Pontoon | | l.s. | \$4.50 \$1,200.00 | 1.1 | | | |
| | Sampling (0'-50') | 250 |) l.f. | \$10.00 | 1.1 | | | |
| 0 | Sampling (51'-100') | | <u>)</u> l.f. | \$12.00 | 1.1 | | | |
| Grout Crew St | Innort | | <u>)</u> l.f. 5 day | \$5.00 \$75.00 | 1.1 | | | |
| Crew Lo | •• | | day day | \$75.00 | 1.1 1.1 | | | |
| | Day Rate | | _day | \$3,600.00 | 1.1 | | | |
| Support | | | day | \$450.00 | 1.1 | | - | |
| | rge (RKCI's),one trip | |) miles | \$1.00 | | \$80.00 | | |
| | ation and Permit Applications ayout & Travel Time (RKCI-Geologist) | | <u>1</u> hrs. 3 hrs. | \$82.00 \$82.00 | | \$328.00 \$656.00 | | |
| Logger | RKCI - tech | | hrs. | \$54.00 | | \$0.00 | | |
| Standby | | | hrs. | \$225.00 | | - | Total | |
| | | | Field | Operations S | Subtotal: | \$10,557.00 | | 58.75% |
| LABOR | ATORY TESTS | QUANTITY | | UNIT PRICE | | TOTAL | | |
| | g Limits (PI) | | <u>)</u> ea. | \$62.00 | - | \$1,240.00 | _ | |
| Sieve Ar | | | ea. | \$57.00 | | \$0.00 | | |
| | ned Compres. | | <u>}</u> ea. | \$45.00 | | \$270.00 | - | |
| | passing #200 sieve Content | 20 | _ea.) ea. | \$48.00 \$9.00 | | \$0.00 \$180.00 | - | |
| | a Bearing Ratio | 20 | ea. | \$800.00 | | \$0.00 | - | |
| Proctor | 0 | | ea. | \$204.00 | | \$0.00 | - | |
| Permeat | | | ~~ | | | | | |
| | | | ea. | \$840.00 | | \$0.00 | | |
| Lime Se | | | ea. | \$250.00 | | \$0.00 | - | |
| Sulfate 0 | Content | | ea. ea. | \$250.00 \$83.00 | | \$0.00 \$0.00 | - | |
| Sulfate C Corrosiv | Content | Ę | ea. | \$250.00 | | \$0.00 | - - - | |
| Sulfate C Corrosiv Consolid Triaxial U | Content ity Test lation with Hyteresis Loop JU (multi-stage) | | ea. ea. ea. ea. ea. ea. | \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 | | \$0.00 \$0.00 \$750.00 \$0.00 \$504.00 | - - - - | |
| Sulfate C Corrosiv Consolid Triaxial C Triaxial C | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) | | ea. ea. ea. ea. ea. ea. | \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 \$1,200.00 | | \$0.00 \$0.00 \$750.00 \$0.00 \$504.00 \$0.00 | - - - - - | |
| Sulfate C Corrosiv Consolid Triaxial C Triaxial C Direct Sh | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) near (UU) | | ea. ea. ea. ea. ea. ea. ea. | \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 \$1,200.00 \$235.00 | | \$0.00 \$0.00 \$750.00 \$0.00 \$504.00 \$0.00 \$0.00 | - | |
| Sulfate C Corrosiv Consolic Triaxial C Triaxial C Direct SI Direct SI | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) | | ea. ea. ea. ea. ea. ea. | \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 \$1,200.00 | | \$0.00 \$0.00 \$750.00 \$0.00 \$504.00 \$0.00 | - | |
| Sulfate C Corrosiv Consolic Triaxial C Triaxial C Direct SI Direct SI Swell Te | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) near (UU) near (CD) | £ | ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$250.00 \$83.00 \$361.00 \$63.00 \$1,200.00 \$235.00 \$497.00 | | \$0.00 \$0.00 \$750.00 \$504.00 \$0.00 \$0.00 \$0.00 | - - - - - - | |
| Sulfate C Corrosiv Consolic Triaxial C Triaxial C Direct SI Direct SI Swell Te | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell | £ | ea. 6 ea. 6 ea. 7 ea. 8 ea. 9 ea. 9 ea. 9 ea. 9 ea. 9 ea. | \$250.00 \$83.00 \$361.00 \$63.00 \$1,200.00 \$235.00 \$497.00 \$292.00 | Subtotal: | \$0.00 \$0.00 \$750.00 \$504.00 \$0.00 \$0.00 \$0.00 \$1,168.00 | - | 37.13% |
| Sulfate C Corrosiv Consolic Triaxial C Triaxial C Direct SI Direct SI Swell Te Sieve Ar | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell halysis w/ Hydrometer | £ | ea. 6 ea. 6 ea. 7 ea. 8 ea. 9 ea. 9 ea. 9 ea. 9 ea. 9 ea. | \$250.00 \$83.00 \$150.00 \$361.00 \$63.00 \$1,200.00 \$235.00 \$497.00 \$292.00 \$128.00 \$tory Testing \$ | | \$0.00 \$0.00 \$750.00 \$504.00 \$0.00 \$0.00 \$0.00 \$1,168.00 \$2,560.00 \$6,672.00 | - | 37.13% |
| Sulfate C Corrosiv Consolic Triaxial C Direct SI Direct SI Swell Te Sieve Ar | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell | 6 | ea. 6 ea. 6 ea. 7 ea. 8 ea. 9 ea. 9 ea. 9 ea. 9 ea. 9 ea. | \$250.00 \$83.00 \$361.00 \$63.00 \$1,200.00 \$235.00 \$497.00 \$292.00 \$128.00 | <u>.</u> | \$0.00 \$0.00 \$750.00 \$504.00 \$0.00 \$0.00 \$0.00 \$1,168.00 \$2,560.00 | - - - - - - - - - | 37.13% |
| Sulfate C Corrosiv Consolic Triaxial C Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer | <u>QUANTITY</u> 0.5 | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$250.00 \$83.00 \$150.00 \$361.00 \$497.00 \$292.00 \$128.00 \$128.00 \$128.00 \$128.00 \$128.00 \$128.00 \$1185.00 \$110.00 | <u>.</u> | \$0.00 \$0.00 \$750.00 \$504.00 \$0.00 \$0.00 \$0.00 \$1,168.00 \$2,560.00 \$6,672.00 TOTAL \$92.50 \$0.00 | - | 37.13% |
| Sulfate C Corrosiv Consolic Triaxial C Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer echnical Engineer | <u>QUANTITY</u> 0.5 | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$250.00 \$83.00 \$150.00 \$361.00 \$497.00 \$292.00 \$128.00 \$128.00 \$128.00 \$128.00 \$1185.00 \$110.00 \$100.00 | <u>.</u> | \$0.00 \$0.00 \$750.00 \$504.00 \$0.00 \$0.00 \$0.00 \$1,168.00 \$2,560.00 \$6,672.00 TOTAL \$92.50 \$0.00 \$200.00 | - - - - - - - - - - | 37.13% |
| Sulfate C Corrosiv Consolic Triaxial C Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote Lab Data | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer echnical Engineer a Entry and Drafting | QUANTITY 0.5 | ea. ea. ea. ea. ea. ea. ea. ea. ea. b ea. ca. b ea. ca. ca. ca. ca. ca. ca. ca. ca. ca. c | \$250.00 \$83.00 \$150.00 \$361.00 \$235.00 \$497.00 \$292.00 \$128.00 tory Testing S <u>UNIT PRICE</u> \$185.00 \$110.00 \$100.00 \$54.00 | <u>.</u> | \$0.00 \$0.00 \$750.00 \$504.00 \$0.00 \$0.00 \$0.00 \$1,168.00 \$2,560.00 \$6,672.00 TOTAL \$92.50 \$0.00 \$200.00 \$324.00 | - - - - - - - - - - - | 37.13% |
| Sulfate C Corrosiv Consolic Triaxial C Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote Lab Data Secretar | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer echnical Engineer | QUANTITY 0.5 | ea. ea. ea. ea. ea. ea. ea. ea. ea. ea. | \$250.00 \$83.00 \$150.00 \$361.00 \$497.00 \$292.00 \$128.00 \$128.00 \$128.00 \$128.00 \$1185.00 \$110.00 \$100.00 | <u>.</u> | \$0.00 \$0.00 \$750.00 \$504.00 \$0.00 \$0.00 \$0.00 \$1,168.00 \$2,560.00 \$6,672.00 TOTAL \$92.50 \$0.00 \$200.00 | - - - - - - - - - - - | 37.13% |
| Sulfate C Corrosiv Consolic Triaxial C Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote Lab Data Secretar | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer echnical Engineer a Entry and Drafting y/Word Processor | QUANTITY 0.5 | ea. ea. ea. ea. ea. ea. ea. ea. ea. b ea. ca. ea. ca. ea. ca. ea. ca. ca. ea. ca. ea. ca. ea. ca. ea. ca. ea. ca. ca. ca. ca. ca. ca. ca. ca. ca. c | \$250.00 \$83.00 \$150.00 \$361.00 \$235.00 \$497.00 \$292.00 \$128.00 \$128.00 \$128.00 \$110.00 \$100.00 \$54.00 \$62.00 | <u>.</u> | \$0.00 \$0.00 \$750.00 \$504.00 \$0.00 \$0.00 \$0.00 \$1,168.00 \$2,560.00 \$6,672.00 TOTAL \$92.50 \$0.00 \$200.00 \$324.00 | | 37.13% |
| Sulfate C Corrosiv Consolic Triaxial C Direct SI Direct SI Swell Te Sieve Ar PROCES Sr. Geot Geotech Jr. Geote Lab Data Secretar | Content ity Test lation with Hyteresis Loop JU (multi-stage) CU (multi-stage) hear (UU) hear (CD) st - Free Swell halysis w/ Hydrometer SS LAB DATA/ BORING LOGS echnical Engineer nical Engineer echnical Engineer a Entry and Drafting y/Word Processor | QUANTITY 0.5 | ea. ea. ea. ea. ea. ea. ea. ea. ea. b ea. ca. ea. ca. ea. ca. ea. ca. ca. ea. ca. ea. ca. ea. ca. ea. ca. ea. ca. ca. ca. ca. ca. ca. ca. ca. ca. c | \$250.00 \$83.00 \$150.00 \$361.00 \$235.00 \$497.00 \$292.00 \$128.00 \$128.00 \$128.00 \$100.00 \$100.00 \$54.00 \$62.00 \$250.00 \$port Writing \$ | <u>.</u> | \$0.00 \$0.00 \$750.00 \$504.00 \$0.00 \$0.00 \$1,168.00 \$2,560.00 \$2,560.00 \$6,672.00 TOTAL \$92.50 \$0.00 \$200.00 \$324.00 \$124.00 | | |