#### <u>EXHIBIT A</u> PROFESSIONAL ENGINEERING SERVICES for the CITY OF HENDERSONVILLE WWTF AERATION BASIN NO. 2 REPAIRS AND REHABILITATION PROJECT

#### PROJECT UNDERSTANDING

The City of Hendersonville owns and operates a wastewater treatment facility (WWTF) with a permitted capacity of 4.8 MGD located at 99 Balfour Road, Hendersonville, NC. Biological treatment of wastewater at the WWTF is accomplished using an extended aeration activated sludge process with two 2.4 million gallon (MG) rectangular aeration basins. The existing aeration basins are constructed of cast-in-place concrete, on timber pile foundations, with each basin sharing a common center wall lengthwise, a common influent channel, and a common effluent channel. A condition assessment of the existing aeration basins was recently conducted as part of the City's WWTF Master Plan, which identified structural defects and provided recommendations for further evaluation and repairs. The most notable structural defect identified from the WWTF Master Plan is an outward bowing/deflection of the north wall of aeration basins and repairs to correct structural defects. The repairs that are to be completed as part of this project are expected to include:

- New concrete buttresses constructed on the exterior of the north wall of aeration basin No. 2 to provide structural support against further deflection/bowing. Extension of the existing aeration basin base slab/pile cap along with new timber piles or helical piers to support the new buttress assembly (or other alternative structural support method identified during design).
- Repair of interior and exterior cracks on the north wall of aeration basin No. 2, as well as any other high priority cracks around the aeration basins discovered upon further inspection.
  - Repairs are expected to include the use of low viscosity, hydrophilic expanding polyurethane injection chemical grout adhesive system and polymer modified cementitious mortar.
- Replacement of aging equipment and failing pipe penetrations within the aeration basins.

The following Professional Engineering Services shall be performed by McKim & Creed and/or its subconsultants and will be initiated upon written authorization by the City:

#### **SCOPE OF SERVICES**

#### ITEM 1 – PROJECT ADMINISTRATION

M&C will perform the following project administration activities:

- 1. Manage and coordinate the activities of the Project Team including M&C's staff and subconsultants, according to the project scope.
- Conduct a project kick-off meeting with OWNER and project team to review project goals, critical success factors, risks, communication protocols, team roles and responsibilities and confirm project milestones and schedule. Prepare and distribute written meeting minutes.
- 3. Prepare and distribute written meeting summaries of project status meetings.
- 4. Prepare monthly invoices for M&C's services in format acceptable to the City.

# ITEM 2 – PRELIMINARY ENGINEERING

#### Design Survey Services

McKim & Creed will coordinate with our surveying subconsultant SEPI Inc. to provide design survey services as described below:

- 1. Establish initial field control:
  - a. SEPI office personnel will research on-line for the most available and accessible North Carolina Geodetic Grid monumentation within reasonable location of the site. The office personnel will process and adjust the control network from the collected field data.
  - b. SEPI field personnel will tie the control network of the survey work to the NC Geodetic Grid System utilizing GPS. The horizontal datum will be referenced to NAD 83 (2011). The vertical datum will be referenced to NAVD 88. The field personnel will establish a pair of primary control points on-site. Secondary control points will be set for locations of features.
- 2. Survey of the top of the north wall of existing aeration basin No. 2 to determine the existing degree of deflection/bowing prior to any repair work.
- 3. Provide limited topographic survey of the existing grade surrounding the north wall of existing aeration basin No. 2 from the basin wall to the existing facility fence line. Topographic survey data will be utilized to support repair designs for the north wall of aeration basin No. 2 and to establish pre-construction conditions within the FEMA 100-year flood plain for the purposes of comparison to post-construction conditions and avoidance of impacts to regulatory flood elevations.
- 4. Determine horizontal and vertical location of the existing 12-inch diameter ductile iron blower discharge air piping at the penetrations into each existing aeration basin from the blower building.
- 5. Determine existing grade elevations surrounding the existing aeration basins at the base of the exterior walls. Existing grade elevations will be collected at each corner of the structure, and approximately every 10-ft in between along each wall.

#### Geotechnical Investigations

McKim & Creed will coordinate with our geotechnical subconsultant, S&ME, to provide a limited geotechnical investigation of subgrade conditions immediately north of the north wall of aeration basin No. 2. This task includes geotechnical investigations to provide data needed to design structural foundations. The geotechnical investigations will include:

- 1. Explore subsurface conditions by performing up to three soil test borings, assuming one boring located near the center of the north wall of aeration basin No. 2, and one boring near each end of the north wall of aeration basin No. 2 approximately 30-ft from the northeast and northwest ends of the wall, respectively. Soil borings are assumed to be performed to auger refusal or partially weather rock. This is assumed to occur at depths of 40-feet or less based on prior borings at the WWTF.
- 2. Laboratory testing will be performed to verify soil classification and obtain soil strength parameters for construction and structure foundation design recommendations.
- 3. A findings report will be prepared which will include the following:
  - a. Site and exploration location plan
  - b. Soil test boring logs and generalized subsurface profiles
  - c. Recommendations for foundation bearing for the structures, including recommendations for timber pile foundations and helical pier foundations
  - d. Recommendations for site preparation and construction of structural compacted fills
  - e. Recommendations for control of groundwater or drainage systems if necessary

# Materials Testing

McKim & Creed will coordinate with our materials testing subconsultant, S&ME, to provide non-destructive materials testing services to assist in the structural evaluation of the existing aeration basins. The materials testing services will include:

- 1. Ground penetrating radar (GPR) and Pacometer scanning of the exterior walls of the aeration basins to confirm the general size and spacing of reinforcing steel, and to determine estimated concrete cover thickness. GPR and Pacometer scanning will be limited to a maximum of three locations on the exterior face of the north wall of aeration basin No. 2, one location on the interior face of the north wall of aeration basin No. 2, and one location on the exterior face of the east, west, and south exterior walls of the aeration basins. GPR scanning will be performed in accordance with ASTM D6432.
- 2. Impact echo tests on the exterior face of the exterior walls of the aeration basins to identify concrete defects, voids, or abnormalities. Impact echo tests will be focused on a representative sample of visually identified defects and areas of efflorescence on the exterior face of the exterior walls of the aeration basins, and a limited representative area of the exterior face of the exterior walls that appear to be in "good" condition for comparison of results. Impact echo tests will be performed in accordance with ASTM C1383.

- 3. Use of Ultrasonic Pulse Velocity (Surfer) across cracking in areas identified by impact echo tests to collect data on the depth of cracking and its severity. Ultrasonic Pulse Velocity testing will be performed in accordance with ASTM C597.
- 4. Core samples of the exterior walls of the aeration basins will be taken for compressive strength testing according to ASTM C42. Partial depth (approx. 4" diameter x 10" depth) core samples will be taken from the exterior face of the exterior walls of the aeration basins and core holes will be repaired with 5,000 psi high early strength non-shrink grout. A maximum of five core samples are proposed to be collected and tested: two (2) core samples from the north wall of aeration basin No. 2, and one (1) core sample from each of the east, west, and south exterior walls of the aeration basins
- 5. Preparation of a materials testing report summarizing the procedures, results, and analysis of findings.

# Structural Evaluation and Recommendations for Repairs and Rehabilitation

McKim & Creed will coordinate with the City to perform a structural evaluation of the existing aeration basin facilities to assess existing conditions and identify recommendations for repairs and rehabilitation. Services provided under this task will include:

- 1. Review of record drawings and available photos, original construction documentation, proposals, and other pertinent information for the existing aeration basins.
- 2. Assist the City in coordinating the schedule for draining and cleaning of aeration basin No. 2 to allow for the observation of interior concrete surfaces.
- 3. Conduct a site visit to visually review the condition of the aeration basin facilities. The observation of the aeration basin facilities will include:
  - a. Exposed exterior surfaces of the above grade exterior north, south, east, and west side walls of the facility
  - b. The visible interior surfaces of the exterior and interior walls for both aeration basins No. 1 and No. 2, assuming aeration basin No. 1 will be in service during the site visit, and aeration basin No. 2 will be drained for complete interior review.
  - c. The exposed top surfaces of the bottom slab where visible in aeration basin No.2.
  - d. The exposed top surfaces of the bottom slab of aeration basin No. 2 where visible on the exterior of the northern exterior wall in the location of the proposed test pit.
  - e. The exposed top and side surfaces of the elevated top slabs and the exposed surfaces of the bottom sides of these same components, where visible.
  - f. Random non-destructive "ping" sound testing of accessible concrete surfaces to locate sub-surface voids and abnormalities.
  - g. Numbered photographs of existing conditions and defects noted during the review.

It is assumed that the City will assist McKim & Creed's review by providing the following:

- a. Scheduled draining and cleaning of the interior of aeration basin No. 2 will be completed by the City prior to the site visit to ensure both the interior and exterior conditions can be reviewed thoroughly.
- b. Ladders and air monitors will be provided by the City to enable access to the interior of aeration basin No. 2.
- c. Excavation will be completed by the City to provide a test pit on the exterior of the northern exterior wall of aeration basin No. 2 for observation of the bottom slab of aeration basin No. 2.
- 4. A brief technical memorandum (TM) will be prepared to summarize the findings of the structural evaluation of the existing aeration basins. Recommendations for repairs and rehabilitation to the existing aeration basins will be provided in the TM. A draft TM will be submitted to the City for review, with the geotechnical investigations report, materials testing report, and site survey map included as attachments.
- 5. A preliminary opinion of probable construction cost (OPCC) will be prepared based on the recommendations for repairs and rehabilitation identified by the structural evaluation. The preliminary OPCC will be submitted to the City for review along with the structural evaluation TM.
- 6. <u>TM and Preliminary OPCC Review</u>: A review meeting will be held with City staff to review the findings of the structural evaluation, review the recommendations for repairs and rehabilitation, and receive the City's comments on the TM and preliminary OPCC. The TM and preliminary OPCC will be finalized based on the feedback received from the City.

# ITEM 3 – DETAILED DESIGN

Upon receiving authorization from the City, M&C will proceed with the Detailed Design Phase, including the following efforts:

#### 90% and Final Design

- Prepare and submit a 90% design level set of documents including Drawings, Technical Specifications and the Engineer's Opinion of Probable Construction Cost. The 90% design level documents shall incorporate the City comments and concerns received from the preliminary engineering technical memorandum submittal.
- 2. McKim & Creed will attend regular meetings with the City staff as needed during the detailed design effort to provide project status updates, review project documents and receive comments. In addition, we will schedule and participate in one formal design review meeting with the City's project team at the 90% stage of Detailed Design preparation.
- 3. Upon approval of the 90% submittal and responses to the City's comments and concerns, McKim & Creed will finalize contract documents for submittal to the North

Carolina Department of Environmental Quality, Division of Water Infrastructure (NCDEQ DWI) for approval of the Bid and Design Package per the Letter of Intent to Fund from NCDEQ DWI dated February 22, 2022. This task will include the following:

- a. Prepare the final Engineer's Opinion of Probable Construction Cost
- b. Prepare recommended schedule for bidding and construction
- c. Submit final contract documents to the City and NCDEQ DWI

#### Quality Assurance and Quality Control

McKim & Creed will include an in-house quality assurance/quality control (QA/QC) review with staff members not involved in the project. The QA/QC review will be entirely separate from the normal in-house reviews conducted by the project team and the City's staff. The QA/QC review will be conducted after the preliminary engineering technical memorandum and 90% design submittals, and its findings presented to the design team prior to comments from the City's preliminary engineering technical memorandum and 90% design reviews.

# ITEM 4 – BID PHASE SERVICES

Following approval of the Bid and Design Package by NCDEQ DWI, McKim & Creed will prepare the bid documents. The bid documents will consist of the plans (drawings) and specifications for the WWTF Aeration Basin No. 2 Repairs and Rehabilitation Project. The bid documents will be used by contractors to prepare bids for the work detailed on the plans and described in the specifications. A final Engineer's Opinion of Probable Construction Cost will also be provided with the bid documents.

Our scope of work for Bid Phase services is premised on our understanding that McKim & Creed will be responsible for managing the bids and contracting process for one (1) single prime construction contract.

Bid Phase Services performed by M&C will include:

- 1. Provide necessary information to the City for the preparation of the project bid advertisement.
- 2. Issue electronic bid documents to the City's QuestCDN on-line advertisement and bidding service.
- 3. Conduct the pre-bid conference and prepare and issue minutes.
- 4. Assist in answering bidders' questions.
- 5. Prepare addenda as appropriate to interpret, clarify, or further define the Contract Documents. Addenda will be issued by McKim & Creed upon the City's approval.
- 6. Consult with and advise the City to determine the acceptability of substitute materials and equipment proposed by bidders when substitution prior to the award of contracts is allowed by the contract documents.
- 7. Conduct the bid opening.
- 8. Review bid packages and prepare the certified bid tabulations.

- 9. Provide written letter of recommendation of award to the City.
- 10. Assist the City in submitting the bid information to NCDEQ DWI to secure Authority to Award. This task is contingent on the receipt of bids less than or equal to the available funding for the project. Value engineering to reduce the bid price to fall within the range of available funding has not been included as part of this task. If value engineering is required, this effort shall be considered additional services and may be provided utilizing the Unallocated Project Budget phase upon written authorization from the City.
- 11. Assist the City in the contract award process following receipt of Authority to Award.
- 12. Prepare and issue conformed documents to incorporate addenda issued during the bidding process into the contract documents to be used by the contractor for construction.
- 13. Provide conformed documents for execution for the City, McKim & Creed, and contractor.

If a re-bid is required, this effort shall be considered additional services. If required, additional services will be provided utilizing the Unallocated Project Budget phase upon written authorization from the City.

# ITEM 5 – CONSTRUCTION PHASE SERVICES

#### Construction Administration

Our scope of work for Construction Administration services assumes a single prime construction contract over a 6-month consecutive construction period. The construction period is based on five (5) months to reach substantial completion and one (1) additional month to reach final completion. If the contract duration extends beyond this construction period, or is delayed, McKim & Creed shall be entitled to adjustment of the scope and fee associated with this task. If required, additional services associated with construction administration may be provided utilizing the Unallocated Project Budget phase upon written authorization from the City.

Our construction administration services will include:

- 1. Conduct the pre-construction meeting on-site at the WWTF and issue meeting minutes.
- 2. Schedule and hold regular monthly construction progress meetings with the City and contractor. These meetings are assumed to be held on-site at the WWTF, or virtually via Microsoft Teams or Zoom, for a period of five (5) months. Prepare and distribute construction meeting minutes to document discussions and responsibilities.
- 3. Receive, log, track and perform shop drawing reviews. Compare shop drawings to the plans and technical specifications, note deficiencies or compliance issues, and issue comments to the contractor.
- 4. Receive, log, track, & respond to contractor's written requests for information or clarification of the contract documents.
- 5. Provide clarification of requirements as indicated on the construction plans and specifications if/when questions arise during construction.

- 6. Receive, log, track, & respond to notifications from contractor of changes to work conditions and requests for change orders.
- 7. Review materials testing for conformance to the specifications.
- 8. Receive, log, track, & review contractor's monthly invoices and make recommendations for payment.
- 9. Conduct site visits with City staff monthly to review project status, and confirm/certify that work is progressing in accordance with the approved construction documents.
- 10. Schedule and conduct the substantial completion evaluation. Prepare the substantial completion punch list and submit to the City for concurrence, and work with the Contractor to ensure outstanding work is completed.
- 11. Upon satisfactory completion of the substantial completion punch list and after reviewing test results from the Contractor, prepare the Engineer's Substantial Completion Certification.
- 12. Schedule and conduct the final completion evaluation. Prepare the final completion punch list and submit to the City for concurrence, and work with the Contractor to ensure work is fully complete.
- 13. After the Contractor has satisfactorily completed the final punch list, submitted all test results, as-built redlined drawings, O&M manuals (if required), and release of waivers and claims, McKim & Creed will prepare the Engineer's Final Completion Certification.

#### **Construction Observation**

McKim & Creed will provide periodic field observation during construction as required for certification to regulatory agencies. This scope of work is based on an average of one day per week and an active construction duration of 20 weeks (5 months). If the contract duration extends beyond this construction period or is delayed, McKim & Creed shall be entitled to adjustment of the scope and fee associated with this task. If required, additional services associated with construction observation will be provided utilizing the Unallocated Project Budget phase upon written authorization from the City. McKim & Creed will provide the following services:

- 1. Preparation of reports for each day construction observer is onsite.
- 2. Maintain a photographic record during construction to document aspects of the construction process.
- 3. Document field conditions and maintain a record of the weather, Contractor's personnel on-site, Contractor's equipment on-site, and the specific work task(s) completed since the last site visit.
- 4. Verify that the work being performed complies with the approved plans and specifications and coordinate with the City, Engineer, and Contractor to remedy any situations where the work is not in compliance.

- 5. Confirm that Contractor as-built documents are continuously being kept up-to-date and being completed to the minimum standards of care.
- 6. Review the Contractor's monthly pay requests to confirm that quantities are accurate and that lump sum percentages are representative of the current progress of lump sum work.
- 7. Participate in the substantial completion and final completion evaluations.

#### ITEM 6 – POST-CONSTRUCTION SERVICES

Upon authorization from the City, McKim & Creed shall perform the following postconstruction services:

1. <u>Post-Construction Survey</u>

McKim & Creed will coordinate with our subconsultant SEPI Inc. to provide limited topographic survey of the post-construction grade surrounding the north wall of existing aeration basin No. 2 from the basin wall to the existing facility fence line. Post-construction topographic survey data will be compared to pre-construction topographic survey data to ensure that no permanent fill has been placed within the FEMA 100-year flood plain. Following the results of the post-construction topographic survey and comparison to pre-construction conditions, McKim & Creed will coordinate with the contractor to ensure modifications to the final grading are completed, as necessary.

2. <u>Record Drawings</u>

Our effort for Record Drawing preparation services is premised on the understanding that the contractor will be responsible for continuously maintaining the red-lined "as-built" markups on the approved construction drawings. McKim & Creed will utilize the red-lined markups provided by the contractor to prepare the final Record Drawings. Record Drawings will be submitted to the City upon completion. After City review and approval, digital copies (AutoCAD and PDF format) of the Record Drawings will be delivered to the City.

3. <u>One Year Assistance</u>

McKim & Creed will assist the City with operational and warranty assistance on a time and materials basis as may be needed. Generally, the services will be as follows:

- a. Provide for a mid-year warranty inspection with the City and the contractor to develop a warranty punch list and then review the completed work of the contractor to verify items have been corrected.
- b. Provide for final warranty inspection with the City and the contractor at 11 months after substantial certification to develop a warranty punch list and then review the completed work of the contractor to verify items have been corrected.

#### ITEM 7 – UNALLOCATED PROJECT BUDGET

Item 7 will be set aside as unallocated project budget to provide for changes in the scope of work or unforeseen revisions to the project approach. McKim & Creed will not utilize or expend effort on Item 7 without prior development of a scope, schedule, and fee estimate for the change in scope, and written authorization from the City. All tasks invoiced under the unallocated budget shall require prior approval from the City.

#### **ITEM 8 – COMPENSATION**

McKim & Creed will perform the services outlined in this Exhibit A as indicated below. Services will be billed monthly on an hourly time and expense basis in accordance with the hourly rate schedule included as an attachment to this Exhibit A.

Item	Fee
Item 1: Project Administration	\$14,127.00
Item 2: Preliminary Engineering	\$50,463.00
Item 2.1: Subconsultant Fee – SEPI Inc. (Survey) <sup>1</sup>	\$3,600.00
Item 2.2: Subconsultant Fee – S&ME, Inc. (Geotech and	\$25,700.00
Materials Testing) <sup>1</sup>	
Item 3: Detailed Design	\$62,388.00
Item 4: Bidding and Award Phase	\$11,226.00
Item 5: Construction Phase Services	\$60,375.00
Item 6: Post-Construction Services	\$19,920.00
Item 6.1: Subconsultant Fee – SEPI Inc. (Survey) <sup>2</sup>	\$2,800.00
Subtotal (Items 1 – 6)	\$218,499.00 NTE
Item 7: Unallocated Project Budget (10% of subtotal)	\$22,000.00 NTE
Total Estimated Fee (Items 1 – 7)	\$240,499.00 NTE

<sup>1</sup>Items 2.1 and 2.2 are included in the overall fee for Item 2 and are shown for information only. <sup>2</sup>Item 6.1 is included in the overall fee for Item 6 and is shown for information only. <sup>3</sup>Not To Exceed (NTE) = To be billed on an hourly time and expense basis

# ITEM 9 – ANTICIPATED PROJECT SCHEDULE

Task	Anticipated Duration from NTP (Calendar Days)	Anticipated Task Duration (Calendar Days)
Notice to Proceed	0	0
Project Kickoff	5	5
Preliminary Engineering TM and EOPC	95	90
90% Design Submittal	155	60
City of Hendersonville Review	170	15
Bid and Design Package Submittal to NCDEQ DWI	200	30
NCDEQ DWI Review of Bid and Design Package	260	60
Bid Documents Submittal	275	15
Advertise for Bids	305	30
Open Bids	305	0
Submit Bid Documents to NCDEQ DWI	320	15
Contract/Bonds Preparation/Notice to Proceed	380	60
Construction Substantially Complete	530	150
Construction Final Completion	560	30
Record Drawings Submittal	590	30
Warranty Period Complete	955	365

The following is the estimated schedule for the scope outlined above:

*Note: The schedule provided is approximate and may vary depending on City review and regulatory approval.* 

#### ITEM 10 – ADDITIONAL SERVICES

If authorized in writing by the City, McKim & Creed shall furnish or obtain from others Additional Services of the types listed below. These services will be paid for by the City on an hourly rate basis in accordance with the current Hourly Rate Schedule. If required, additional services will be provided utilizing the Unallocated Project Budget phase upon written authorization from the City.

- 1. Collection of precise dimensional data of existing construction conditions.
- 2. Providing for the measurement of dry film thickness of any existing coating systems in place.
- 3. Expert witness or technical support concerning property surveying or engineering matters for which the Engineer has no direct liability.
- 4. Assistance with permitting.
- 5. Assistance with bidder prequalification.
- 6. Providing for additional soil borings or geotechnical analyses beyond the identified scope of work.

- 7. Providing for an environmental impact statement (EIS).
- 8. Providing for detailed investigations and/or surveys for archeological sites, protected/threatened/endangered species of shellfish, fish, wildlife, and natural vegetation.
- 9. Providing for determining, evaluating, and assistance with contaminated soils for the project area.
- 10. Providing assistance for wetland mitigation.
- 11. Preparing for, coordinating with, participating in and responding to structured independent review processes for construction management, cost estimating, value engineering and constructability reviews requested by the City and performing or furnishing services required to revise studies, reports, drawings, specifications, or other bidding documents as a result of such review processes.
- 12. Providing for any re-designs requested by the City after final design drawings have been approved.
- 13. Boundary surveys for the wastewater treatment facility site.
- 14. Construction survey and staking.
- 15. Preparing for multi-prime contracts and bidding.
- 16. Development of design or bid documents to comply with alternate funding agencies or other funding mechanisms.
- 17. Engineer-led operator training on equipment, processes, or other miscellaneous training related to the existing or proposed facilities.
- 18. Providing for Special Inspections (North Carolina State Building Code) if required by the Local Inspections Departments.
- 19. Assistance in connection with Bid protest, re-bidding, or renegotiation contracts for construction, materials, equipment, or services.
- 20. Preparing to serve or serving as a consultant or witness for the City in any litigation, arbitration or other dispute resolution process related to the project.
- 21. Other services performed or furnished by McKim & Creed not otherwise provided for in this Agreement. These services are to be identified as additional services for City approval prior to McKim & Creed performing the service.

# ITEM 11 – OWNER'S RESPONSIBILITIES

The following items shall be the responsibility of the City:

1. Provide McKim & Creed with all criteria and full information as to the City's requirements for the project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which the City will require to be included in the Drawings and Specifications; and furnish copies of the

City's standard forms, conditions and related documents for McKim & Creed to include in the Bidding Documents, when applicable.

- 2. The timely provision of all available information, data, reports, records, and maps to which the City has access and which are needed by McKim & Creed for the performance of the services provided herein.
- 3. Providing assistance and cooperation for McKim & Creed in obtaining any other needed material which the City does not have in its possession.
- 4. Making available the services of the City as may be necessary to obtain information as needed to perform the work program set forth in the Scope of Services.
- 5. The designation of a single representative who will be authorized to make necessary decisions required on behalf of the City and will serve to provide the necessary direction and coordination for the project.
- 6. Advise McKim & Creed of the identity and scope of services of any independent consultants employed by the City to perform or furnish services in regard to the project, including, but not limited to, cost estimating, project peer review, value engineering and constructability review.
- 7. Attend the pre-bid conference, bid opening, pre-construction conferences, construction progress and other job-related meetings and Substantial Completion, final payment, and warranty reviews.

#### ITEM 12 – MISCELLANEOUS PROVISIONS

1. <u>Opinion of Probable Construction Costs</u>: Engineer's opinions of probable construction costs are based on assumed labor costs and approximate quantities of material and equipment, and therefore is of a conditional character. The Engineer cannot and does not guarantee the cost of work to be performed by others since market or bidding conditions can change at any time and changes in the scope or quality of the project may affect estimates. The City waives and releases McKim & Creed from any loss, liability, or claim arising out of or in any way related to the Engineer's opinion of probable construction costs.

#### END OF EXHIBIT A



# Water Market 2022 Schedule of Hourly Rates

Employee Classification	(Rate/Hour)
Principal	\$295.00
Engineering Manager	\$260.00
Project Manager III	\$225.00
Project Manager II	\$205.00
Project Manager I	\$185.00
echnical Specialist II	\$270.00
echnical Specialist I	\$230.00
Project Engineer IV	\$215.00
Project Engineer III	\$200.00
Project Engineer II	\$165.00
roject Engineer I	
ngineer Intern	\$133.00
Land Planner/Landscape Architect	
&C Specialist III	
&C Specialist II	\$175.00
&C Specialist I	\$138.00
Programmer III	\$185.00
rogrammer II	\$165.00
rogrammer I	
Designer IV	
esigner III	
Designer II	
Designer I	
r. CAD Technician	
AD Technician	
r. Project Administrator	
Project Administrator	
Administrative Assistant	
Construction Administrator IV	
Construction Administrator III	
Construction Administrator II	
Construction Administrator I	
Project Representative III	
roject Representative II	
Project Representative I	
GIS Technician I	
GIS Technician II	
Field Technician I	
ield Technician II	\$115.00
ield Services Manager	





# Water Market 2022 Schedule of Hourly Rates

#### **Expenses**

In addition to labor, McKim & Creed bills for the following project related costs at a contractually agreed markup: printing; conference calling charges; document review, permit or recording fees paid on behalf of the client; shipping; bid advertisement; specialty materials, software or equipment rental; sub-consultant fees; costs of project related employee travel including meals, lodging, airfare and miscellaneous travel costs such as tolls, parking etc.; mileage for all company-owned vehicles (trucks) will be billed at \$0.85/mile; employee owned vehicles used for transportation related to the project will be charged at the prevailing federal mileage rate allowed by the IRS at the time the travel occurs.

McKim & Creed also bills for the cost of internal reproduction and the use of specialized equipment related to subsurface utility vacuum excavation, mobile scanning (LIDAR), and hydrographic surveying.

