ST. PETERSBURG CITY COUNCIL

Report

Meeting of October 6, 2022

TO: The Honorable Gina Driscoll, Chair and Members of City Council

SUBJECT: A Resolution approving the First Amendment to the Professional Services Agreement dated January 11, 2021 between KCCS, Inc. ("Consultant") and the City of St. Petersburg, Florida for the Consultant to provide continued construction, engineering and inspection services including the additional hours for Construction Engineering services due to the project duration being extended as well as a change to the pile driving operation for the Bridge Replacement at 40th Ave NE over Placido Bayou Project in an amount not to exceed \$802,999.25; providing that the total Agreement, as amended, shall not exceed \$2,227,364.15 (ECID Project Nos. 18032-110 and 18032-111; Oracle Nos. 16880, 16140, 16677 and 16722); rescinding unencumbered appropriations in the Citywide Infrastructure Capital Improvement Fund (3027) as follows: \$330,000 from the 11th Avenue South Bridge over Booker Creek Bridge Replacement Project (14549) and \$381,000 from the 157367 58th St N over Bear Creek Bridge Project (17974); approving a supplemental appropriation in the amount of \$711,000 from the unappropriated balance of the Citywide Infrastructure Capital Improvement Fund (3027), resulting from the above rescissions, to the 157154 40 Av/NE Placido Bayou FY19 Project (16677); authorizing the Mayor or his designee to execute the First Amendment; and providing an effective date.

EXPLANATION: The City initiated this project to replace the 40th Ave NE Bridge over Placido Bayou. This project provides for the construction of a new bridge and subsequent demolition and removal of the existing bridge. The new bridge will be constructed in two major phases allowing for two lanes of traffic to be maintained. The new bridge will accommodate two lanes of traffic, bicycle lanes, raised sidewalks, and a raised median. This is a Local Agency Program (LAP) project that will utilize federal funds for construction. Design was funded and administered by the City. Construction will be funded utilizing Federal and City funds and administered by the City.

Due to the specialty materials and compliance monitor and reporting requirements, specialized construction Engineering & Inspection is required to ensure quality is maintained in construction, as well as compliance to all State and Federal requirements.

On February 25, 2020, the City issued a Request for Qualifications No. 7629 for Construction and Engineering Inspections for this Bridge Replacement project.

On April 7, 2020, the City received five Statements of Qualifications (SOQs). Three shortlisted firms were invited to make oral presentations before the evaluation committee. The evaluation committee heard presentations from each of the three firms and, on September 24, 2020, recommended negotiations with KCCS. Administration has negotiated a Professional Services Agreement with KCCS in the amount of \$1,424,365.

On December 3, 2020, City Council approved the selection of KCCS, Inc.

On January 6, 2021, the City and KCCS entered into a Professional Services Agreement for the construction of a new 40th Avenue NE Bridge and subsequent demolition and removal of the existing bridge.

The initial agreement provided the following services:

- Task 1. Staff Meetings A/E shall schedule and attend a meeting with the District Contract Compliance Manager prior to the Pre-Construction conference
- Task 2 Pre-Construction Conference
- Task 3 LAP Compliance
- Task 4 Upload Construction Phase Documents to LAPIT and EOC A/E shall upload LAP construction phase documents into Local Agency Program Information Tool ("LAPIT") and EOC websites
- Task 5 Upload Construction Phase Documents to MAC A/E shall upload LAP Construction phase documents into MAC website
- Task 6 Construction contract Administration and Inspection

Due to the test pile installation program yielded results that required production pile lengths to be longer than anticipated, the Contractor elected to use mechanical splices to facilitate the driving of the piles with the equipment currently onsite. The procurement of these mechanical splices impacted the schedule and extended the project duration. Additionally, the incorporation of these splices altered the pile driving operations in a manner that required Pile Driving Analyzer (PDA) pile testing to be performed over multiple days, thus exceeding the estimated number of days for the PDA testing. Redesign of bent caps due to variations in the pile capacity, additional analysis on precast beams, and the utility/right-of-way issue contributed the most to this additional work.

Amendment No. 1 to the Agreement in the amount of \$802,999.25 shall provide continued Construction Engineering and Inspection services, including Federal compliance monitoring for the bridge. This amendment will cover the additional hours for Construction Engineering services due to the project duration being extended as well as a change to the pile driving operation.

The Agreement and Amendment No. 1 include the following phases and associated not to exceed costs respectively:

		Αŗ	pproved	A	uthorized	
Agreement	Staff Meetings	\$	5,164.78	\$	5,164.78	
	Pre-Construction Conference	\$	5,693.13	\$	5,693.13	
	LAP Compliance	\$	53,010.00	\$	53,010.00	
	Upload Construction Phase Documents to LAPIT and EOC	\$	3,887.40	\$	3,887.40	
	Upload Construction Phase Documents to MAC website	\$	60,485.44	\$	60,485.44	
	Construction Contract Administration and Inspection	\$1	,196,124.15	\$1	,196,124.15	
	Allowance	\$	100,000.00	\$	100,000.00	
Amendment No. 1	LAP Compliance	\$	22,087.50			(New)
	Upload Construction Phase Documents to LAPIT and EOC	\$	7,068.00			(New)
	Upload Construction Phase Documents to MAC website	\$	29,884.98			(New)

Total	\$ 2,227,364.15	\$1,424,364.90
Allowance	\$ 72,999.93	(New)
Construction Contract Administration and Inspection	\$ 670,958.84	(New)

RECOMMENDATION: Administration recommends approving the First Amendment to the Professional Services Agreement dated January 11, 2021 between KCCS, Inc. ("Consultant") and the City of St. Petersburg, Florida for the Consultant to provide continued construction, engineering and inspection services including the additional hours for Construction Engineering services due to the project duration being extended as well as a change to the pile driving operation for the Bridge Replacement at 40th Ave NE over Placido Bayou Project in an amount not to exceed \$802,999.25; providing that the total Agreement, as amended, shall not exceed \$2,227,364.15 (ECID Project Nos. 18032-110 and 18032-111; Oracle Nos. 16880, 16140, 16677 and 16722); rescinding unencumbered appropriations in the Citywide Infrastructure Capital Improvement Fund (3027) as follows: \$330,000 from the 11th Avenue South Bridge over Booker Creek Bridge Replacement Project (14549) and \$381,000 from the 157367 58th St N over Bear Creek Bridge Project (17974); approving a supplemental appropriation in the amount of \$711,000 from the unappropriated balance of the Citywide Infrastructure Capital Improvement Fund (3027), resulting from the above rescissions, to the 157154 40 Av/NE Placido Bayou FY19 Project (16677); authorizing the Mayor or his designee to execute the First Amendment; and providing an effective date.

COST/FUNDING/ASSESSMENT INFORMATION: A portion of the funding has been previously appropriated in the Water Resources Capital Projects Fund (4003), DIS PC 40th Ave NE Bridge Main Replacement FY18 Project (16880), in the General Capital Improvements Fund (3001), 157154 40 Av/NE Placido Bayou FY19 Project (16677), and in the Citywide Infrastructure Capital Improvement Fund (3027), 157154 40 Av/NE Placido Bayou FY19 Project (16677), Bridge Recon/Load Testing FY18 Project (16140) and Bridge Life Extension Program FY19 Project (16722). Additional funding will be available after the rescission of unencumbered appropriations from the following projects in the Citywide Infrastructure Capital Improvement Fund (3027), \$330,000 from the 11th Avenue South Bridge over Booker Creek Bridge Replacement Project (14549) and \$381,000 from the 157367 58th St N over Bear Creek Bridge Project (17974) and approval of a supplemental appropriation in the amount of \$711,000 from the unappropriated balance of the Citywide Infrastructure Capital Improvement Fund (3027), resulting from the above rescissions, to the 157154 40 Av/NE Placido Bayou FY19 Project (16677).

ATTACHMENTS: Resolution

Revised Appendices

RESOLUTION NO. 2022-

A RESOLUTION APPROVING THE FIRST AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT DATED JANUARY 6, 2021 BETWEEN KCCS, INC. ("CONSULTANT") AND THE CITY OF ST. PETERSBURG, FLORIDA FOR THE CONSULTANT TO **CONTINUED PROVIDE** CONSTRUCTION, ENGINEERING AND INSPECTION SERVICES TO INCLUDE LAP COMPLIANCE, UPLOADING CONSTRUCTION PHASE DOCUMENTS TO LAPIT, EOC, AND MAC WEBSITE; AND CONSTRUCTION CONTRACT ADMINISTRATION AND INSPECTION FOR THE BRIDGE REPLACEMENT AT 40TH AVE NE OVER PLACIDO BAYOU PROJECT IN AN AMOUNT NOT TO EXCEED \$802,999.25; PROVIDING THAT THE TOTAL CONTRACT AMOUNT SHALL NOT EXCEED \$2,227,364.15 (ECID PROJECT NOS. 18032-110 AND 18032-111; ORACLE NOS. 16880, 16140, 16677 AND 16722); AUTHORIZING THE MAYOR OR HIS DESIGNEE TO EXECUTE THE FIRST AMENDMENT; RESCINDING UNENCUMBERED APPROPRIATIONS IN THE CITYWIDE INFRASTRUCTURE CAPITAL IMPROVEMENT FUND (3027) AS FOLLOWS: \$330,000 FROM THE 11TH AVENUE SOUTH BRIDGE OVER BOOKER CREEK BRIDGE REPLACEMENT PROJECT (14549) AND \$381,000 FROM THE 157367 58TH ST N OVER BEAR CREEK BRIDGE PROJECT (17974); APPROVING A SUPPLEMENTAL APPROPRIATION THE **AMOUNT** OF \$711,000 **FROM** UNAPPROPRIATED BALANCE OF THE **CITYWIDE** INFRASTRUCTURE CAPITAL IMPROVEMENT FUND (3027) RESULTING FROM THE ABOVE RESCISSIONS TO THE 157154 40 AV/NE PLACIDO BAYOU FY19 PROJECT (16677); AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of St. Petersburg, Florida ("City") and KCCS, Inc. ("Consultant") entered into a Professional Services Agreement on January 6, 2021 for Construction and Inspection Engineering Services related to the Bridge Replacement at 40th Ave NE over Placido Bayou Project ("Project"); and

WHEREAS, the City and the Consultant desire to amend the agreement for the Consultant to provide continued construction, engineering and inspection services to include LAP compliance, uploading construction phase documents to LAPIT, EOC, and the MAC website; and construction contract administration and inspection for the Bridge Replacement at 40th Ave NE over Placido Bayou Project in an amount not to exceed \$802,999.25

WHEREAS, a portion of the funding needed for this amendment will be available after approval of (i) rescinding unencumbered appropriations from the following projects in the Citywide Infrastructure Capital Improvement Fund (3027): \$330,000 from the 11th Avenue South Bridge over Booker Creek Bridge Replacement Project (14549) and \$381,000 from the 157367 58th St N over Bear Creek Bridge Project (17974) and (ii) a supplemental appropriation in the amount of \$711,000 from the increase in the unappropriated balance of the Citywide Infrastructure Capital Improvement Fund (3027), resulting from the above rescissions, to the 157154 40 Av/NE Placido Bayou FY19 Project (16677).

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of St. Petersburg, Florida, that the First Amendment to the Professional Services Agreement dated January 11, 2021 between KCCS, Inc. ("Consultant") and the City of St. Petersburg, Florida for the Consultant to provide continued construction, engineering and inspection services to include lap compliance, uploading construction phase documents to LAPIT, EOC, and the MAC website; and construction contract administration and inspection for the Bridge Replacement at 40th Ave NE over Placido Bayou Project in an amount not to exceed \$802,999.25 is hereby approved.

BE IT FURTHER RESOLVED that the total contract amount shall not exceed \$2,227,364.15.

BE IT FURTHER RESOLVED that the Mayor or his designee is authorized to execute a First Amendment.

BE IT FURTHER RESOLVED that unencumbered appropriations in the Citywide Infrastructure Capital Improvement Fund (3027) in the amount of \$330,000 from the 11th Avenue South Bridge over Booker Creek Bridge Replacement Project (14549) and \$381,000 from the 157367 58th St N over Bear Creek Bridge Project (17974) are hereby rescinded.

BE IT FURTHER RESOLVED that there is hereby approved from the increase in the unappropriated balance of the Citywide Infrastructure Capital Improvement Fund (3027), resulting from the above rescissions, the following supplemental appropriation for FY23:

DEPARTMENT:

<u>Citywide Infrastructure Capital Improvement Fund (3027)</u> 157154 40 Av/NE Placido Bayou FY19 Project (16677)

\$711,000

This resolution shall become effective immediately upon its adoption.

LEGAL:

BUDGET:

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ATTACHMENT 1 TO APPENDIX A - SCOPE OF SERVICES BRIDGE REPLACEMENT AT 40TH AVE NE OVER PLACIDO BAYOU CITY OF ST. PETERSBURG, FLORIDA PROJECT NO. 18032-110 FPN 443600-1-58-01

In addition to the services, activities, responsibilities and Deliverables set forth in Appendix A, the A/E shall also provide the services, activities, responsibilities and Deliverables set forth in this Attachment 1 to Appendix A as follows:

TASK 3 LAP COMPLIANCE – ADDITIONAL SERVICES

- **3.1** A/E shall perform LAP Compliance duties to include:
 - Attend continue to conduct compliance portion to review EEO/DBE/OJT/Wages
 - Site Inspections Jobsite Bulletin Board
 - Address FDOT compliance questions, CCCA Reviews and any compliance audits
 - Equal Opportunity Compliance Records
 - Approving Certification of Sublets
 - Employee Interviews RCS to have a template labor interview form and provide to field inspector(s)
 - Provide Resident Compliance Specialist for Equal Opportunity Compliance
 - Davis Bacon Wage Rate Review. Identify the begin/end day of each contractor's pay period as well as the regular pay date. Verify total deductions/authorizations for all non-federal tax deductions are approved by the US Department of Labor (cell phone, uniforms). Have a process for determining that all active workers are listed on the payroll each week. Take immediate action against non-compliance when identified. Verify all statement for compliance for accuracy. Identify when additional classifications are needed. Ensure that all required information is listed on the payroll to perform employee interview. RCS reviews each interview, complete Section D and compare against payroll and act on the information submitted as necessary
 - Compliance Reporting
 - If contractor has not yet participated in the new FDOT requirements, conduct a Training Assessment.

TASK 4 UPLOAD CONSTRUCTION PHASE DOCUMENTS TO LAPIT AND EOC – ADDITIONAL SERVICES

- **4.1** A/E shall upload LAP construction phase documents into LAPIT and EOC websites to include, but not limited to:
 - Review in EOC DBE commitments and DBE Payments reported by the contractor and ensure they are complete and meet CUF

Appendix A – Scope of Services Bridge Replacement at 40th Avenue NE over Placido Bayou City of St. Petersburg Project No. 18032-110

- Upload EEO documentation, Sublets, Rental Agreements, EEO Officer, July EEO Reports
- Bulletin Board Inspections
- Daily Inspection Reports including pictures and videos

TASK 5 UPLOAD CONSTRUCTION PHASE DOCUMENTS TO MAC - ADDITIONAL SERVICES

- **5.1** A/E shall upload LAP construction phase documents into MAC website to include, but not limited to:
 - Concrete and base testing reports
 - Contractors asphalt testing reports
 - Asphalt testing reports

TASK 6 CONSTRUCTION CONTRACT ADMINISTRATION AND INSPECTION – ADDITIONAL SERVICES

6.1 General:

It shall be the responsibility of the firms or individuals to administer, monitor, and inspect the Construction Contract between the City and Contractor, such that the project is constructed to conform with the plans, specifications, and special provisions, including State and Federal Funding Requirements, for the Construction Contract.

Observe the Contractor's work to determine the progress and quality of work. Identify discrepancies, report significant discrepancies to the City, and direct the Contractor to correct such observed discrepancies.

Assist in preparing a supplemental funding request and coordinate with the City for processing field/change order requests with funding agency.

Coordinate with the City Construction Manager for any significant omissions, substitutions, defects, and deficiencies noted in the work of the Contractor and the corrective action that has been directed to be performed by the Contractor.

6.2 Survey Control:

Check or establish the survey control baseline(s) along with sufficient baseline control points and bench marks at appropriate intervals along the project in order to:

- (1) Make and record measurements necessary to calculate and document quantities for pay items,
- (2) Make and record pre-construction and final cross section surveys of the project site in those areas where earthwork (i.e., embankment, excavation, subsoil excavation, etc.) is part of the construction project, and
- (3) Perform incidental engineering surveys.

6.3 On-Site Inspection:

Monitor the Contractor's on-site construction activities and inspect materials entering into the work in accordance with the plans, specifications, and special provisions for the Construction Contract to determine that the projects are constructed in reasonable conformity with such documents. Maintain detailed accurate records of the Contractor's daily operations and of significant events that affect the work.

Monitor and inspect Contractor's work zone traffic control plan and review modifications to the work zone traffic control plan, including alternate work zone traffic control plan, in accordance with FDOT's procedures. Firm's or individual's employees performing such services shall be qualified in accordance with FDOT's procedures.

6.4 Sampling and Testing:

When directed by the City, the firms or individuals shall perform sampling and testing of component materials and completed work in accordance with the Construction Contract documents. The minimum sampling frequencies set out in FDOT's Materials Sampling, Testing and Reporting Guide shall be met. In complying with the aforementioned guide, provide daily surveillance of the Contractor's quality control activities and perform the sampling and testing of materials and completed work items for verification and acceptance.

Determine the acceptability of all materials and completed work items on the basis of either test results or verification of a certification, certified mill analysis, certified labels and stamps, etc.

The City will monitor the effectiveness of the firm's or individual's testing procedures through observation and independent assurance testing.

Sampling, testing and laboratory methods shall be as required by the City and/or FDOT's Standard Specifications, FDOT's Supplemental Specifications or as modified by the special provisions of the Construction Contract.

Documentation reports on sampling and testing performed by the firms or individuals shall be submitted during the same week that the construction work is done.

When directed by the City, the firms or individuals shall transport samples to be tested to the City laboratory.

Input verification testing information and data into FDOT's database using written instructions provided by FDOT.

6.5 Engineering Services:

Coordinate the Construction Contract administration activities of all parties other than the Contractor involved in completing the construction project.

Services shall include maintaining the required level of surveillance of Contractor activities, interpreting plans, specifications, and special provisions for the Construction Contract. Maintain complete, accurate records of all activities and events relating to the project and properly document all project changes. The following services shall be performed:

- (1) Attend a Pre-Construction Conference, Resident Compliance Officer to attend meeting.
- (2) Schedule and attend a meeting with the District Contract Compliance Manager prior to the Pre-construction Conference. The Resident Compliance Officer shall attend this meeting.
 - In most cases, the above will take two (2) separate meetings based on experience and knowledge of the particular firm.
- (3) Verify that the Contractor is conducting inspections, preparing reports and monitoring all storm water pollution prevention measures associated with the project. For each project that requires the use of the NPDES General Permit, provide at least one inspector who has successfully completed the "Florida Stormwater, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors". The firms or individual's inspector will be familiar with the requirements set forth in the FEDERAL REGISTER, Vol. 57, No. 187, Friday, September 5, 1992, pages 4412 to 4435 "Final NPDES General Permits for Storm Water Discharges from Construction Sites" and FDOT's guidelines.
- (4) Analyze the Contractor's schedule(s) (i.e. baseline(s), revised baseline(s), updates, as-built, etc.) for compliance with the contract documents. Elements including, but not limited to, completeness, logic, durations,

activity, flow, milestone dates, concurrency, resource allotment, and delays will be reviewed. Verify the schedule conforms with the construction phasing and Maintenance of Traffic (MOT) sequences, including all contract modifications. Provide a written review of the schedule identifying significant omissions, improbable or unreasonable activity durations, errors in logic, and any other concerns as detailed in the Construction Project Administration Manual (CPAM).

- (5) Analyze problems that arise on a project and proposals submitted by the Contractor; work with the Construction Manager to resolve such issues, and process the necessary paperwork for City approval.
- (6) Produce reports, verify quantity calculations and field measure for payment purposes as needed to prevent delays in Contractor operations and to facilitate prompt processing of such information in order for the City to make timely payment to the Contractor.
- (7) Prepare and make presentations for meetings and hearings in connection with the project covered by the Agreement and Task Order.
- (8) Monitor each Contractor and subcontractor's compliance with specifications and special provisions of the Construction Contract in regard to payment of predetermined wage rates in accordance with contract requirements.
- (9) Provide a Resident Compliance Officer for surveillance of the Contractor's compliance with Construction Contract requirements. The Resident Compliance Officer is responsible for reviewing, monitoring, evaluating and acting upon documentation required for Construction Contract compliance, and maintaining the appropriate files thereof. Typical areas of compliance responsibility include EEO Affirmative Actions for the prime contractor and subcontractor, DBE Affirmative Action, Contractor Formal Training, Payroll, Subcontracts, and On-the-Job Training (OJT). The Resident Compliance Officer must keep all related documents and correspondence accurate and up to date; attend all compliance reviews and furnish the complete project files for review; and assist the District Contract Compliance Manager as requested.
- (10) Conduct inspection of Job Boards and Employee Interviews.
- (11) City shall provide Public Information Services.
- (12) Prepare and submit to the City Construction Manager monthly, a Construction Status Reporting System (CSRS) report, in a format to be provided by the City.
- (13) Video tape the pre-construction conditions throughout the project limits. Provide a digital photo log or video of project activities, with heavy emphasis on potential claim items/issues and on areas of real/potential public controversy.

(14) Provide a digital camera for photographic documentation of preconstruction state and of noteworthy incidents or events during construction.

These photographs will be filed and maintained on the firms or individual's computer using a digital photo management system.

Photographs shall be taken the day prior to the start of construction and continue as needed throughout the project. Photographs shall be taken the days of conditional, partial and final acceptance.

6.6 <u>Geotechnical Engineering:</u>

Become familiar with the existing site conditions and the contract documents. Observe and record the progress and quality of foundation work to determine that the foundations are constructed at the correct location and elevation, identify discrepancies, submit monthly progress reports to the City Construction Manager, and direct the Contractor to correct such observed discrepancies. Attend the preconstruction conference and/or special geotechnical meeting for the Construction Contract. All services under this section will be performed in accordance to FDOT Specification Section 455. The geotechnical engineer will provide the following services with the assistance of a qualified inspector who has completed the FDOT Drilled Shaft/Pile Driving Qualification courses.

6.6.1 Piles:

- a) Review Contractor's Pile Installation Plan and provide comments to the City Construction Manager within five (5) working days of the Contractor's submittal.
- b) Perform Wave Equation Analysis for Piles (WEAP) to determine suitability of hammer driving system for the project. Provide results (check stresses, design capacity, and ultimate capacity) to the City Construction Manager within five (5) working days of the Contractor's submittal.
- c) Ensure dynamic testing performed (per the contract documents and when deemed necessary by the City Construction Manager) during initial driving and re-drives.
- d) When monitoring the test pile driving process, determine proper fuel settings, thickness of pile cushions and when they need changing. Record all pertinent information that is needed to determine the driving criteria such as jetting, preforming, pre-drilling, reference elevation, hammer serial number hammer cushion material and thickness, pile cushion material and thickness, etc. This information shall be provided to the City Construction Manager within 24 hours after the test pile driving process is completed. In most cases this information will be requested immediately following test pile completion. Submit electronic Pile Driving Analyzer (PDA) files within 24 hours after the test pile is completed.

- e) Ensure Case Pile Wave Equation Analysis (CAPWAP) is performed on test pile data for selected blows, using the latest version. At a minimum, CAPWAP shall be performed on initial drive data where required resistance is obtained below the minimum tip elevation and on set-check data (if any). If requested, the end of drive CAPWAP will be performed in the field upon completion of the drive, otherwise it shall be completed within 24 hours of driving the instrumented pile.
- f) Analyze the test data and available soils data as required to establish production pile lengths and driving criteria. The analysis must include WEAP utilizing CAPWAP results, to determine the driving criteria that will correlate accurately with driving resistance, blows per foot, energy, stresses and capacity. Submit preliminary report(s) recommending production pile lengths and driving criteria to the City Construction Manager for approval within four (4) working days after the test pile program is completed, unless requested sooner. The preliminary report shall include CAPWAP and WEAP printed & plotted outputs, and all raw data obtained by the PDA and CAPWAP solutions on DVD or CD computer disks.
- g) Furnish final written letters, signed and sealed, in the agreed format for production pile lengths and the driving criteria. The driving criteria letter must include blow count criteria, special requirements and limitations on settings (strokes/energy) to limit the stresses per the Specifications. Include recommendations as to what to consider firm driving when applicable, to obtain the required minimum penetration.
- h) For projects with Embedded Data Collectors (EDCs), provide personnel proficient in operation of EDC monitoring equipment for data collection, interpretation and analysis. Utilize the most current version of Smart-Structures software along with antenna, workstation and stand. Provide qualified personnel capable of making accurate determination of pile acceptability in real time. Pack and submit the collected EDC data to the City Construction Manager within 24 hours of driving each pile.

PROJECT TEAM

The key A/E Project team members include the following staff:

- Kellie Loper, PE, Senior Project Engineer
- Stoney Morgado, Project Administrator
- Jeff Cole, Contract Support Specialist
- Mark Stanley, Senior Inspector
- Steve Ashby, Inspector
- Sabrina Covalt, Resident Compliance Specialist

Subconsultants:

Covalt Group, Inc.

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- Echezabal & Associates, Inc.
- Tierra, Inc.