

SECOND AMENDMENT TO AGREEMENT

CONSULTANT SERVICES AGREEMENT

Between

CITY OF COLUMBIA, MISSOURI

And

CENTER FOR TRANSPORTATION

AND THE ENVIRONMENT, INC. (CTE)

THIS SECOND AMENDMENT (hereinafter “Amendment”) is made by and between the **City of Columbia, Missouri** (hereinafter “COMO”), a Constitutional charter city of the State of Missouri, and **Center for Transportation and the Environment, Inc.** (hereinafter “CTE”), a nonprofit organization organized in the State of Georgia, and with authority to transact business within the State of Missouri, both parties to an Agreement for Professional Services Signed September 10, 2018, First Amended on August 17, 2021, (collectively “Original Agreement”) and is entered into on the date of the last signatory below (hereinafter “Effective Date”). COMO and CTE are each individually referred to herein as a “Party” and collectively as the “Parties”.

WHEREAS, COMO and CTE entered into Original Agreement to provide COMO with certain technical and professional consulting services for purposes of assisting COMO with the FTA Low or No Emission Grant Program; and

WHEREAS, both Parties wish to mutually amend Original Agreement to extend the term of services to Monday, January 31, 2023;

WHEREAS, both Parties wish to mutually amend Original Agreement to include 24 total months of Deployment Validation as described in Attachment I of Original Agreement;

WHEREAS, both Parties now wish to amend the Original Agreement pursuant to the terms and conditions provided for in this Amendment;

NOW, THEREFORE, in consideration of the mutual covenants contained herein and for other good and valuable consideration, the Parties hereto agree as follows:

- I. **General.** All terms and provisions of Original Agreement, a copy of which is attached hereto as **Attachment 1** and made a part of this Amendment, will remain in full force and effect on both Parties, except as amended in this Amendment. If there is conflict between this Amendment and the Original Agreement, or any earlier amendment, then the terms of this Amendment will prevail.
- II. **Amendment.** Both Parties agree to amend Original Agreement in the following manner:

- a. Section 2. Term of Agreement. The text of Section 2 in the Original Agreement shall be deleted in its entirety and shall be replaced with the following, to read:

“The period of performance pursuant to this Amendment commenced upon the Effective Date of the Original Agreement. All Services, work products, and deliverables defined in the Original Agreement shall be provided from CTE to COMO by **Monday, January 31, 2023, at 04:00 pm Central Standard Time.**”

- b. Task 7. CTE Statement of Work - Deployment Validation. Attachment I, CTE Statement of Work, of the Original Agreement is hereby amended so that Task 7, Deployment Validation, of the Project Management Plan and CTE Scope of Work is amended to include 24 total months of Deployment Validation, replacing the original 15 total months.

- III. **Confirmation of Original Agreement as Amended.** The Parties hereby adopt, ratify, and confirm the Original Agreement as it is amended by this Amendment. This Amendment shall be binding on, and inure to the benefit of, the parties hereto.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment by their duly authorized representatives as of the date of the last signatory hereto.

CITY OF COLUMBIA, MISSOURI

By: _____ *SSC*

John Glascock, City Manager

Date: _____

ATTEST:

By: _____

Sheela Amin, City Clerk

APPROVED AS TO FORM:

By: _____

Nancy Thompson, City Counselor / KMM

Center for Transportation and the Environment, Inc.

By: _____ *[Signature]*

Date: 11/15/2021

ATTEST:

Attachment I: Original Agreement



CENTER FOR TRANSPORTATION & THE ENVIRONMENT
730 PEACHTREE STREET
SUITE 760
ATLANTA, GA 30308
P. 678-244-4150
F. 678-244-4151

CONSULTANT SERVICES AGREEMENT
Between
CENTER FOR TRANSPORTATION
AND THE ENVIRONMENT, INC. (CTE)
And
CITY OF COLUMBIA, MO

THIS AGREEMENT (hereinafter "Agreement") is by and between the **City of Columbia, Missouri** (hereinafter "COMO"), a Missouri municipal corporation whose address is 701 E. Broadway, Columbia, MO 65201 and **Center for Transportation and the Environment, Inc.** (hereinafter "CTE"), a Georgia nonprofit corporation with the authority to transact business within the State of Missouri and whose address is 730 Peachtree Street, Suite 760, Atlanta, GA 30308, and is entered into on the date of the last signatory below (hereinafter "Effective Date"). COMO and CTE are each individually referred to herein as a "Party" and collectively as the "Parties."

WITNESSETH:

WHEREAS, COMO is the owner and operator of a public transportation system and was awarded a federal grant under the Federal Transit Administration's (FTA) Low or No Emission Grant Program;

WHEREAS, CTE aims to improve the efficiency and sustainability of transportation systems and assists public transit agencies with management and analysis of alternative energy vehicle deployments; and

WHEREAS, COMO wishes to purchase, and CTE wishes to provide, consulting services for purposes of assisting COMO with the FTA Low or No Emission Grant Program.

NOW, THEREFORE, in consideration of the mutual covenants set out in this Agreement and for other good and valuable consideration (the receipt and sufficiency of which is hereby acknowledged), the Parties agree as follows:

ATTACHMENTS

The following attachments are incorporated by reference and made part of this Agreement herein:

- Attachment I: CTE Statement of Work*
- Attachment II: CTE Rate Schedule*
- Attachment III: General Provisions - Required Federal Clauses*
- Attachment IV: Work Authorization Affidavit Form*

1. STATEMENT OF SERVICES TO BE PERFORMED

By executing this Agreement, CTE agrees to perform and comply with the scope of work set forth in the Statement of Work, attached and fully incorporated herein as **Attachment I**. CTE shall perform the scope of work specified in the time and manner described and in accordance with the terms and provisions of this Agreement. CTE agrees to perform the scope of work with that standard of professional care, skill, and diligence normally provided in the performance of similar services.

2. TERM OF AGREEMENT

The period of performance for this Agreement shall commence upon the Effective Date of this Agreement. Services, work products and deliverables defined in CTE's Statement of Work shall be completed no later than three (3) years from the Effective Date.

3. AGREEMENT AMOUNT

COMO agrees to pay CTE for the following: (1) its services at CTE's hourly rates, and (2) reasonable expenses incurred by CTE for subcontract services, materials, transportation, and lodging while performing services for COMO within the authorized Scope of Work. CTE's hourly rates will be provided by CTE's hourly rate schedule set forth in **Attachment II**. CTE reserves the right to adjust its rate schedules once per year throughout the term of this Agreement. CTE will invoice COMO for services provided based on actual and allowable costs. It is expressly understood by both Parties that in no event will the total amount to be paid by COMO under the terms of this Agreement exceed **Four Hundred Thirty-Two Thousand Five Hundred Dollars (\$432,500)**, unless otherwise agreed to by both Parties in writing and executed as an amendment to this Agreement. CTE will only be paid for the time and effort needed to complete the actual Scope of Work required for this Agreement, which may be less than the total amount above.

4. INVOICES

CTE will submit invoices to COMO on a monthly basis, with the appropriate supporting documentation providing evidence of hours worked and associated hourly rates, as well as any documentation of actual costs incurred and paid by CTE in performing their scope of work under this Agreement. A final invoice will be submitted by CTE within 30 days of the end date of the project or Termination of this Agreement. Invoices will be submitted by mail or courier to the following:

City of Columbia, MO
Public Works
ATTN: Director of Public Works
P.O. Box 6015
Columbia, MO 65205-6015

COMO agrees to pay all uncontested amounts within thirty (30) days of receipt of an invoice. COMO expressly reserves the right to disapprove in whole or in part a request for payment where COMO reasonably believes the services invoiced were not performed

in a timely and satisfactory manner under the terms of this Agreement. COMO shall notify CTE in writing of the contested invoice within thirty (30) days of its receipt and provide reasoning for COMO's disapproval. CTE shall provide written response to COMO within fifteen (15) days of receipt of notice of contested invoice providing a cure for the issue presented or otherwise explaining its justification for the invoice. If the issue remains, then the Parties may mutually reach an acceptable agreement on the issue.

5. TERMINATION

This agreement may be terminated in whole or in part as follows:

- A. By Either party, if the other Party materially fails to comply with the terms and conditions of this Agreement and such failure is not corrected within fifteen (15) days following receipt of written notice from the non-breaching party.
- B. By CTE, upon thirty (30) days written notification to COMO setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated.
- C. By COMO, upon thirty (30) days written notification to CTE setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated.
- D. By COMO, if COMO's prime award supporting this Agreement is terminated by FTA.

6. INDEMNIFICATION

To the fullest extent not prohibited by law, CTE shall indemnify and hold harmless COMO, its directors, officers, agents, and employees from and against all claims, damages, losses, and expenses (including but not limited to attorney's fees) arising by and to the extent caused by any negligent act or failure to act of CTE, of any subcontractor (meaning anyone including, but not limited to, consultants having a contract with CTE or a subcontractor for part of the services), of anyone directly or indirectly employed by CTE or by any subcontractor, or anyone for whose acts CTE or its subcontractor may be liable in connection with providing these services. This provision does not, however, require CTE to indemnify, hold harmless, or defend COMO from its own negligence.

7. MISCELLANEOUS

- A. *Independent Contractor Status.* The Parties agree that CTE, as well as any individual working for CTE, is an independent contractor and not an employee of COMO for any purpose. Nothing contained in this Agreement shall be construed to create the relationship of employer and employee, principal and agent, partnership, or joint venture. Both parties acknowledge that CTE is not an employee for state or federal tax purposes and is not entitled to any employee benefits of COMO.
- B. *Subcontracting.* CTE may subcontract with third party providers in performance of specific tasks included in CTE's Statement of Work. In the event that subcontractors are used, CTE will notify COMO of the intent to use subcontractors and ensure subcontractor adherence to the same quality standards and assurances required of CTE under the terms of this Agreement, including

adherence to applicable Federal Terms and Conditions.

- C. *Non-Exclusivity.* As an independent contractor, CTE may engage the services of any other individual or company that competes with COMO or offers services similar to those offered by COMO, and any such engagement shall not be considered a breach of this Agreement.
- D. *Entire Agreement.* This Agreement constitutes the entire Agreement of the Parties with respect to the subject matter of the Agreement and supersedes all previous oral and written agreements, understandings, and communications of the Parties relating to such matters.
- E. *Amendment or Waiver.* This Agreement may not be modified, amended or waived except by a written instrument executed by duly authorized representatives of both Parties. No failure or delay in exercising any right shall operate as a waiver thereof.
- F. *Severability.* Should any part of this agreement be rendered or declared invalid or unenforceable by a court of competent jurisdiction, it shall not affect the validity of any other provision, which shall remain in full force and effect.
- G. *Assignment.* Neither Party may assign its respective rights or duties under this agreement to a third Party (except to a successor in interest to substantially all of the business of the assignor) without the prior written consent of the other Party.
- H. *Governing Law.* This Agreement shall be governed, interpreted, and enforced in accordance with the laws of the State of Missouri and the laws of the United States, as applicable. The venue for all litigation arising out of, or relating to this Agreement shall be in Boone County, Missouri, or the United States Western District of Missouri. The Parties hereto irrevocably agree to submit to the exclusive jurisdiction of such courts in the State of Missouri.
- I. *Unauthorized Aliens Prohibited.* CTE shall comply with Missouri Revised Statute Section 285.530 in that CTE shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri. As a condition for the award of this Agreement, CTE shall by sworn affidavit and provision of documentation, affirm (i) its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services (ii) that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. The form of the Work Authorization Affidavit is set forth in **Attachment IV** attached hereto and made a part of this Agreement. CTE shall require all subcontractors to observe the requirements of this section and shall obtain a Work Authorization Affidavit from each subcontractor performing any of the contracted services.
- J. *No Waiver of Immunities.* In no event shall the language of this Agreement constitute or be construed as a waiver or limitation for either Party's rights or defenses with regard to each Party's applicable sovereign, governmental, or official immunities and protections as provided by federal and state constitution or laws.
- K. *General Laws.* CTE shall comply with all federal, state and local laws, rules, regulations and ordinances.
- L. *Federal Grant Provisions.* Both parties shall comply with all applicable federal

grant provisions, a copy of which is attached hereto as **Attachment III** and made a part of this Agreement.

M. *Notice.* Any notice, demand, request or communication required or authorized by this Agreement shall be delivered either by hand, overnight courier or mailed by certified mail, return receipt request, with postage prepaid to:

IF TO COMO:

City of Columbia
Public Works Department
ATTN: Director of Public Works
P.O. Box 6015
Columbia, MO 65205-6015

IF TO CTE:

CTE
ATTN: Dan Raudebaugh
730 Peachtree St, Suite 760
Atlanta, GA, 30308

Any notice shall be deemed to have been completed when sent by certified or registered mail to the other Party at the address set forth herein, or delivered in person to the Party or its authorized representative.

N. *Contract Documents.* The Contract Documents include this Agreement and the following attachments and exhibits which are incorporated herein by reference:

Exhibits:

Attachment I: CTE Statement of Work
Attachment II: CTE Rate Schedule
Attachment III: General Provisions - Required Federal Clauses
Attachment IV: Work Authorization Affidavit Form


In the event of a conflict between the terms of any of the Contract Documents and the terms of this Agreement, the terms of this Agreement Control. In the event of a conflict between the terms of any Contract Documents, the terms of the documents control in the order listed above.

O. *Entire Agreement.* This Agreement represents the entire and integrated agreement between the Parties relative to the contracted services herein. All previous or contemporaneous contracts, representations, promises and conditions relating to the contracted services herein are superseded.

- Signature Page to Follow-


IN WITNESS WHEREOF, the parties hereto have executed this Agreement by their duly authorized representatives as of the date of the last signatory to this Agreement.

COMO: City of Columbia, Missouri

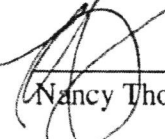
BY: 
Mike Matthes, City Manager

DATE: 9-10-18

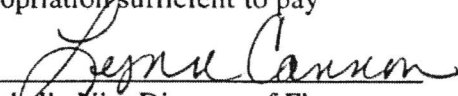
ATTEST:

BY: 
Sheela Amin, City Clerk


APPROVED AS TO FORM:

BY: 
Nancy Thompson, City Counselor *AK*

CERTIFICATION: I hereby certify that this Agreement is within the purpose of the appropriation to which it is to be charged, Account No. 55316188-604023PT061, and that there is an unencumbered balance to the credit of such appropriation sufficient to pay therefor.


Michelle Nix, Director of Finance *Elaw*
Lynn Cannon, Asst.

CTE: Center for Transportation and the Environment, Inc.

BY: 
Dan Raudebaugh, Executive Director

DATE: 7-23-18

FIRST AMENDMENT TO AGREEMENT

CONSULTANT SERVICES AGREEMENT

Between

CITY OF COLUMBIA, MISSOURI

And

CENTER FOR TRANSPORTATION

AND THE ENVIRONMENT, INC. (CTE)

THIS AMENDMENT (hereinafter "Amendment") is made by and between the **City of Columbia, Missouri** (hereinafter "COMO"), a Constitutional charter city of the State of Missouri, and **Center for Transportation and the Environment, Inc.** (hereinafter "CTE"), a nonprofit organization organized in the State of Georgia, and with authority to transact business within the State of Missouri, both parties to an Agreement for Professional Services authorized by City Council on September 04, 2018, (hereinafter "Original Agreement"), and is entered into on the date of the last signatory below (hereinafter "Effective Date"). COMO and CTE are each individually referred to herein as a "Party" and collectively as the "Parties".

WHEREAS, COMO and CTE entered into Original Agreement to provide COMO with certain technical and professional consulting services for purposes of assisting COMO with the FTA Low or No Emission Grant Program; and

WHEREAS, both Parties wish to mutually amend Original Agreement to extend the term of services to Monday, January 31, 2022;

WHEREAS, both Parties now wish to amend the Original Agreement pursuant to the terms and conditions provided for in this Amendment;

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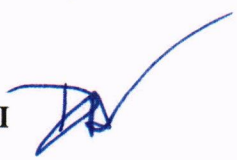
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- III. **Confirmation of Original Agreement as Amended.** The Parties hereby adopt, ratify, and confirm the Original Agreement as it is amended by this Amendment. This Amendment shall be binding on, and inure to the benefit of, the parties hereto.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment by their duly authorized representatives as of the date of the last signatory hereto.

CITY OF COLUMBIA, MISSOURI



By: ^{DocuSigned by:} John Glascock
09A8FE5A8D1468...
John Glascock, City Manager

Date: 8/17/2021

ATTEST:

By: ^{DocuSigned by:} Sheela Amin
4E1F069B868D40A...
Sheela Amin, City Clerk

Name: _____

APPROVED AS TO FORM:

By: ^{DocuSigned by:} Nancy Thompson ^{DS} MB
DA01C98E798B4D2...
Nancy Thompson, City Counselor / MDB

(Seal)
Inc.

Center for Transportation and the Environment,

By: Dan Raudebaugh
Danfel J. Raudebaugh, Executive Director

Date: 7/7/2021

ATTEST:

Attachment I
CTE Statement of Work

Project Management Plan and CTE Scope of Work

This Project Management Plan summarizes the nine primary phases that will be used to guide the City of Columbia deployment of battery electric buses to accomplish the proposed project scope. It also defines CTE's Scope of Work, as defined in the LowNo application awarded by FTA.

1. FTA Award and Sub-Recipient Contract Execution (3 months)

The project will not begin until the FTA has awarded the grant to the COMO and sub-recipient agreements with Center for Transportation & the Environment (CTE) have been executed. We assume that this will take at least three months from the time that FTA announces the awardees.

2. Project Planning and Initiation (1 month)

This phase will include detailed project planning to finalize the Project Management Plan (PMP) that defines the project objectives, scope, approach, resources, tasks, and timeline. CTE will meet COMO project staff to review an initial draft of the PMP, which will be updated based on their feedback. This phase will result in a formal kick-off of the project with all stakeholders and project team members to align the project team on tasks, assignments, timelines, and expectations to successfully meet project goals and objectives.

Key CTE Deliverables: *Project Management Plan, Project Kick-off Presentation*

3. Requirements Analysis (2 months)

This phase includes route modeling and confirmation of the technical specifications for the bus and charging equipment. CTE will model the COMO routes and the BYD battery electric buses to predict the performance of the bus on the selected routes. The model uses powertrain simulation software developed by Argonne National Laboratory called Autonomie. CTE will collect route data by riding the route on an existing COMO bus with a GPS data logger to capture time, distance, speed, acceleration, GPS coordinates, and grade. CTE will use this data, along with specifications for the BYD bus and charging systems (on-route and shop charging units), to develop a baseline route performance model. Additionally, CTE will also develop a rate model to assess the operational cost of the proposed service. If needed, CTE may engage the services of an external vendor to complete the route performance model and the rate model. The results of the route modeling and bus simulation will be presented to COMO and BYD to determine if any changes are required to the bus specifications, routes, or operating service.

The results of the route modeling effort will be used to help refine COMO's bus specification. CTE will assist COMO in reviewing BYD's baseline specification and augmenting the specification with COMO requirements.

Key CTE Deliverables: *COMO Route Model, COMO Rate Model, COMO Bus Technical Specifications*

Key Phase Deliverables: *COMO Bus Technical Specifications*

4. Bus Procurement & Build (12 months)

CTE will support COMO as they finalize the specifications and other documents required for bus procurement. BYD will submit their final design for COMO approval before proceeding with production. COMO, CTE, BYD, and COMO's Resident Inspector will participate in a pre-production meeting to review the sales production order, final design, drawings, production procedures, inspection procedures, acceptance procedures, and BYD's Quality Management System. COMO will issue a notice-to-proceed for the bus build in coordination with construction of the charging stations to ensure that buses are not delivered before the charging stations are ready. CTE will monitor the production with periodic production review meetings. CTE will also conduct periodic quality inspections of bus production. CTE will conduct Pre-Award and Pre-Delivery Buy America Audits to ensure the buses and charging equipment meet Buy America requirements. CTE and COMO will conduct a pre-delivery inspection and approve buses for delivery and post-delivery acceptance inspections.

Key CTE Deliverables: *Periodic Inspection Results, Buy America Audits*

Key Phase Deliverables: *BYD Sales Production Order, Bus Design Drawings, Master Resolution Log, Change Orders, Inspection Logs, BYD Battery Electric Buses*

5. Infrastructure Procurement, Design and Build (11 months)

COMO will work with BYD and CTE during this phase to finalize site plans for the on route and depot charging stations. Final determination of the charging station will be based, in part, on the results of CTE's route model. COMO will conduct a Buy America Audit on Manufactured Products for the charging equipment. COMO will issue an RFP or IFB for site engineering and design (including civil, electrical, and mechanical), construction, and equipment installation. COMO will seek the necessary permits from the local permitting authority to install the system. Once the site preparation is completed and the charging equipment has been installed, BYD will commission the equipment for charging operations. CTE will monitor progress of the construction of depot and on route charging stations to ensure coordination with the bus build.

Key Phase Deliverables: *Charging Station Design, Buy America Audit on Manufactured Products, BYD On Route and Depot Charging Equipment, Commissioned Charging Stations.*

6. Bus and Infrastructure Deployment (1 month)

Delivered buses will be registered and insured by COMO. BYD will conduct a series of tests to ensure the buses can be charged properly with the on-route and depot charging equipment. During this phase, COMO staff will receive the necessary training to operate and maintain the vehicles. COMO and CTE will conduct a series of tests to validate the performance and operation of the buses. These tests will include route validation, where buses are operated along the planned route under controlled conditions (temperature, AC load, passenger load, traffic patterns, etc.) to validate the bus against the performance specification and modeling results. Route validation results will be used to update route planning, as needed. Next, COMO will conduct a Full Service Validation where buses are placed in shadow service for a period acceptable to COMO to demonstrate full operational capability. COMO will review and approve BYD's Operation Manuals, Maintenance Manuals, and Parts Manuals. BYD will review their post-delivery support and warranty procedures with COMO staff. BYD will also deliver spare parts in accordance with the contract. Once buses and the charging stations have completed testing and acceptance by COMO, they will be phased into revenue service.

Key CTE Deliverables: *COMO Route Validation Results*

Key Phase Deliverables: *COMO Route Service Plan; BYD Training Manuals, Operation Manuals, Maintenance Manuals, and Parts Manuals; Trained Operators and Maintenance Technicians*

7. Deployment Validation (15 months)

CTE will collect various operational data points to measure and report actual energy savings, cost savings, and greenhouse gas emissions reductions resulting from deployment of battery electric buses into revenue service. The data will be used to generate a series of Key Performance Indicators (KPIs) to validate performance of battery electric buses against other buses in COMO's fleet. Key performance indicators include availability, on-time performance, energy consumption and costs, maintenance costs, and driver acceptance. By tracking and analyzing these KPIs, COMO and FTA will be fully informed regarding the overall impact of the electric buses.

Key CTE Deliverables: *Quarterly KPI Reports*

8. Project Close-out (3 months)

After the data collection period is over, CTE will issue a final report summarizing project results, findings, and lessons learned. COMO will close out the project with FTA.

Key CTE Deliverables: *Final Report*

9. Project Management, Administration, Reporting and Control (2 years, 8 months)

CTE will guide the entire project by the control and risk management procedures detailed below. CTE's centralized management of the work program will enable team members to concentrate on exceeding project goals and ensure production of deliverables in a clear and well-coordinated manner. CTE will present project findings on behalf of the project team at an appropriate industry venue. CTE will also integrate project findings into our existing battery electric bus decision support tools to improve their function and ability to support this and future ZEB deployments. CTE will represent the [transit agency]'s interests within industry wide ZEB commercialization efforts such as charging and procurement standards committees.

Key CTE Deliverables: *Weekly Status Meeting Agendas and Minutes, Project Work Plan, Near Term Task Plans, Milestone Plan, Issue & Risk Management Log, Quarterly Progress Reports, Project Findings Presentation(s)*

Details of CTE's processes for ensuring the efficient accomplishment of these tasks are as follows.

Collaboration Tools

CTE will provide an on-line, cloud based, collaborative project management website to share project files and communications, coordinate tasks, track issues, and maintain project calendars.

Communications Plan

Team members will participate in weekly or bi-weekly conference calls to discuss project status and current issues. CTE will schedule and manage the calls using calendar invites. Meeting minutes will be taken and stored on the project website. WebEx will be employed when team members desire a presentation format to share status updates. CTE will schedule additional conference calls with team members, as needed.

Reporting Plan

CTE will provide COMO with Monthly Status Reports (MSRs) and Quarterly Management Reports (QMRs). The MSR provides a brief snapshot of project status, identifying progress and key issues that may require management attention. The QMRs provides a summary of progress and accomplishments of the previous quarter and projections for the remainder of the project. The QMR will be structured to allow COMO to easily incorporate the information into the required FTA Quarterly Report submitted by COMO. The QMR will document project progress and activities as well as describe any known risks and plans for mitigation.

CTE will compile the QMRs with input from team members. CTE will provide team members with a QMR template that will include:

- Summary narrative of accomplishments by task/milestone during the period
- Estimated % completion and expected completion dates of task/milestone
- Significant events affecting progress and discussion of project variances
- Projected activities for the next quarter

CTE will also compile a Final Management Report at the end of the project to summarize the project accomplishments, realized benefits, and lessons learned.

Operational Analysis & Reporting Plan

CTE will collect, analyze and report Key Performance Indicators (KPIs) to help track and understand the performance of the electric buses. These indicators will allow COMO and FTA to fully understand operational metrics to determine if the projected benefits have been realized from the deployment of the electric buses, including impact on emissions, reductions in fuel consumption and cost, reductions in maintenance and costs, and any potential increase in ridership. The analysis will also help to understand any impact that charging of electric buses or range limitations may have on service levels, operations, and on-time performance. By tracking and analyzing these KPIs, COMO and FTA will be fully informed regarding the overall impact of the electric buses.

CTE will conduct a reporting workshop with COMO to determine the KPIs they wish to capture and the procedures for collecting data. The following KPI's are a sample of the type of information may be analyzed and tracked:

- **Fuel Cost Savings:** The fuel cost analysis will provide information regarding the cost of powering the electric buses on the chosen routes compared to the cost of operating a non-electric fleet on the same routes.
- **Agency Energy Performance & Fuel Efficiency:** Agency energy performance will provide an overall energy consumption and fuel efficiency comparison (to include diesel, CNG, LNG, LPG and electricity consumption, as applicable) pre- and post-electric bus deployment. Overall CO2 emissions will also be compared.
- **Emission Reduction:** Reduction in fossil fuel consumption will lead to a direct reduction in emissions, which is offset by indirect emissions related to the local utility. CTE will calculate monthly emission reductions as a result of displacing current buses with electric buses.
- **Availability:** The bus availability data will be analyzed to determine the overall availability of the electric buses versus non-electric fleet, regardless of whether the buses are actually placed into service.
- **On-Time Performance:** Analysis of on-time performance will provide details on the impact, if any, electric buses have on the on-time route performance as compared to non-electric fleet operating on the same routes.
- **Ridership:** Ridership will calculate any increase the electric bus deployment and subsequent marketing may have had on COMO's customer base.
- **Maintenance Costs:** The maintenance cost analysis will compare maintenance activities, time, and cost for the electric buses against COMO's non-electric fleet, regardless of whether the maintenance activity is covered by warranty.

Driver reaction and attitudes in response to new designs and advanced technologies are often critical to gaging the success or failure of a new vehicle. Their driving experience can help identify early-on issues or problems that may not manifest themselves in KPI data until much later, or sometimes not at all. CTE can work with the transit agency to conduct a survey of drivers to assess their acceptance of the new technology within six

months of initial deployment, and a second follow-up survey 12 to 18 months later.

Schedule Control Plan

CTE and team members developed a high level schedule as part of this proposal that includes estimated durations for all project phases. During the project's Planning and Initiation phase, CTE will work with each team member to develop a detailed schedule. Based on each team member's inputs, CTE will identify the critical path for the plan and identify any project plan risks. CTE will be responsible for maintaining the overall schedule with input from team members.

Team members will manage the detailed schedule for their assigned tasks and report schedule status for each regular team call. If the actual progress for a task is determined to be behind the planned schedule, CTE will determine if corrective action must be made based on the schedule variance, the amount of work remaining, the impact on other tasks, and impact on the overall schedule. Corrective action, if necessary will be identified during the team conference calls.

Risk Management and Mitigation Plan

CTE provides strong and engaged oversight of project progress through the suite of management controls and procedure outlined above. CTE's management method ensures quick recognition of any project risks that arise. Our project approach includes identifying, documenting, and tracking issues. Issues are assigned to project team members for research, analysis, and resolution. Issues and related tasks are prioritized to ensure that project team members remain focused on the right activities at the right time. Critical issues that remain unresolved or proposed solutions that impact project timeline, scope, budget or resources are escalated to COMO management for immediate attention.

Attachment II
CTE Rate Schedule

CTE hourly rates for primary project resources are provided below. CTE reserves the right to adjust its hourly rates once per year.

Staff Position	Billable Rate
Executive Director	\$326
Senior Consultant	\$247
Managing Consultant	\$134
Engineering Consultant	\$148
Associate	\$78
Director of Finance	\$148
Director of Legal Affairs	\$279
Staff Accountant	\$70
Engineering Co-op	\$65

Attachment III

General Provisions - Required Federal Clauses

GENERAL PROVISIONS REQUIRED FEDERAL CLAUSES

Agency: City of Columbia, Missouri

Contractor: Center for Transportation and Environment, Inc.

I. Incorporating Federal Transit Administration (FTA) Terms

Contractor acknowledges that Agency is a recipient of federal grant funds and agrees that it is bound by the standard terms and conditions required by the U.S. DOT, whether or not expressly set forth in the contract provisions. All contractual provisions required by U.S. DOT, as set forth in the Federal Transit Administration (FTA) Circular 4220.1F, are hereby incorporated by reference. Contractor agrees to abide by all Federal terms and conditions applicable to subcontractors of Agency. In the event of a conflict with other provisions contained in the Agreement, the FTA mandated terms shall control. Contractor shall not perform any act, fail to perform any act, or refuse to comply with any Agency requests, which would cause Agency to be in violation of the FTA terms and conditions.

II. Civil Rights

Contractor agrees to comply with all applicable civil rights laws and regulations, in accordance with applicable federal directives including, but not necessarily limited to, the following provisions provided for in this section. Failure by Contractor to carry out these requirements may be considered a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as Agency deems appropriate:

- a. **Nondiscrimination in Federal Public Transportation Programs.** The Contractor agrees to comply, and assures the compliance of each subcontractor, lessee, third party contractor, or other participant at any tier of the project, with the provisions of 49 USC § 5332, which prohibit discrimination on the basis of race, color, religion, national origin, sex, disability or age, and prohibits discrimination in employment or business opportunity.
 - b. **Nondiscrimination – Title VI of the Civil Rights Act.** Contractor, or any subcontractor, thereof, shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of Federal Department of Transportation assisted contracts.
 - c. **Environmental Justice.** Contractor agrees to facilitate compliance with the requirements of 42 USC § 4321 and any executive orders associated therewith.
 - d. **Limited English Proficiency.** Contractor agrees to facilitate compliance with the requirements of 42 USC § 2000d and any executive orders associated therewith.
 - e. **Nondiscrimination on the Basis of Disability.** Contractor agrees to comply, and assures compliance with the applicable laws and regulations discussed below for nondiscrimination on the basis of disability.
 - i. **Section 504 of the Rehabilitation Act of 1973, as amended.** Section 504, 29 USC § 794, prohibits discrimination on the basis of disability by recipients of federal financial assistance.
 - ii. **Americans with Disabilities Act of 1990, as amended.** ADA, 42 USC §§ 1201 et. seq., prohibits discrimination against qualified individuals with disabilities in all programs, activities, and services of public entities, as well as imposes specific requirements on public and private providers of transportation.
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- iii. ***DOT Public Transportation Regulations – Section 504 & ADA.*** These regulations include DOT regulations, 49 CFR Part 27 and 49 CFR Part 37, and Joint Architectural and Transportation Barriers Compliance Board regulations, 36 CFR Part 1192 and 49 CFR Part 38.

 - f. **Electronic Reports and Information.** For all reports and other information prepared in electronic format developed in connection with a third party contract that the Agency intends to provide to FTA, among others, whether as a contract end item or in compliance with contract administration provisions, Contractor agrees to comply with the accessibility standards of Section 508 of the Rehabilitation Act of 1973, as amended, 29 USC § 794d, and ATBCB regulations, 36 CFR Part 1194.
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Attachment IV

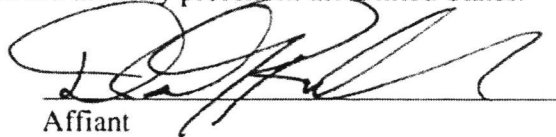
Work Authorization Affidavit Form

**CITY OF COLUMBIA
WORK AUTHORIZATION AFFIDAVIT
PURSUANT TO 285.530 RSMo
(FOR ALL BIDS IN EXCESS OF \$5,000.00)**

County of Fulton
State of Georgia

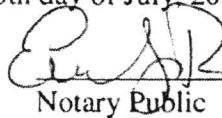
My name is Dan Raudebaugh. I am an authorized agent of Center for Transportation and the Environment (Bidder). This business is enrolled and participates in a federal work authorization program for all employees working in connection with services provided to the City of Columbia. This business does not knowingly employ any person who is an unauthorized alien in connection with the services being provided.

Furthermore, all subcontractors working on this contract shall affirmatively state in writing in their contracts that they are not in violation of Section 285.530.1 RSMo and shall not thereafter be in violation. All subcontractors shall also submit a sworn affidavit under penalty of perjury that all employees are lawfully present in the United States.


Affiant

Daniel J. RAUDEBAUGH
Printed Name

Subscribed and sworn to before me this 13th day of July, 2018.


Notary Public

