

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 16-062

**APPROVAL OF WORK AUTHORIZATION NO. 1 WITH PARSONS
BRINCKERHOFF, INC. FOR GENERAL ENGINEERING CONSULTANT SERVICES
RELATED TO THE MOPAC SOUTH PROJECT**

WHEREAS, by Resolution 16-034 dated June 15, 2015, the Board of Directors authorized the Executive Director to negotiate and execute on behalf of the Mobility Authority an agreement with Parsons Brinckerhoff, Inc. for general engineering consultant services; and

WHEREAS, on July 1, 2016 the Mobility Authority entered into an agreement with Parsons Brinckerhoff, Inc. for general consulting civil engineering services; and

WHEREAS, the Executive Director and Parsons Brinckerhoff, Inc. have agreed to proposed Work Authorization No. 1 for general engineering consultant services for the MoPac South Project; and

WHEREAS, the Executive Director estimates the reasonable fees associated with the services to be provided under Work Authorization No. 1 to be in an amount not to exceed \$1,150,000, including contingency; and

WHEREAS, the services to be provided under in Work Authorization No. 1 shall be substantially completed by December 31, 2017. However, Work Authorization No. 1 will not expire until all tasks associated with the Scope of Services are complete; and

WHEREAS, the Executive Director recommends that the Board approve the proposed Work Authorization No. 1, a copy of which is attached to this resolution as Exhibit A.

NOW THEREFORE, BE IT RESOLVED, that the Board approves an amount not to exceed \$1,150,000 for the services described in Work Authorization No. 1; and

BE IT FURTHER RESOLVED, that the Board authorizes the Executive Director to finalize and execute the proposed Work Authorization No. 1 with Parsons Brinckerhoff, Inc., in the form or substantially the same form as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 7th day of September, 2016.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

EXHIBIT D

WORK AUTHORIZATION

WORK AUTHORIZATION NO. 1

This Work Authorization is made as of this ___ day of _____, 2016, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING ENGINEERING SERVICES, dated as of July 1, 2016 (the Agreement), between the **Central Texas Regional Mobility Authority** (Authority) and **Parsons Brinckerhoff, Inc.** (GEC). This Work Authorization is made for the following purpose, consistent with the services defined in the Agreement:

MoPac South

Design / Environmental Evaluations and Approvals / Project Oversight / Design Procurement

Section A. - Scope of Services

A.1. GEC shall perform the following Services:

Please reference Attachment A – Scope of Work

A.2. The following Services are not included in this Work Authorization, but shall be provided as Additional Services if authorized or confirmed in writing by the Authority.

Not applicable.

A.3. In conjunction with the performance of the foregoing Services, GEC shall provide the following submittals/deliverables (Documents) to the Authority:

Please reference Attachment A – Scope of Work

Section B. - Schedule

GEC shall perform the Services and deliver the related Documents (if any) according to the following schedule:

Services defined herein shall be substantially complete by December 31, 2017. This Work Authorization will not expire until all tasks associated with the Scope of Services are complete.

Section C. - Compensation

C.1. In return for the performance of the foregoing obligations, the Authority authorizes to the GEC an authorized amount \$1,000,000.00 based on Attachment B-Fee Estimate. Compensation shall be in accordance with the Agreement.

C.2. Compensation for Additional Services (if any) shall be paid by the Authority to the GEC according to the terms of a future Work Authorization.

Section D. - Authority's Responsibilities

The Authority shall perform and/or provide the following in a timely manner so as not to delay the Services of the GEC. Unless otherwise provided in this Work Authorization, the Authority shall bear all costs incident to compliance with the following:

Not applicable.

Section E. - Other Provisions

The parties agree to the following provisions with respect to this specific Work Authorization:

Not applicable.

Except to the extent expressly modified herein, all terms and conditions of the Agreement shall continue in full force and effect.

Authority: Central Texas Regional Mobility
Authority

GEC: Parsons Brinckerhoff, Inc.

By: Mike Heiligenstein

By: Mario Medina

Signature: _____

Signature: _____

Title: Executive Director

Title: Area Manager

Date: _____

Date: _____

**CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY ATTACHMENT A –
SCOPE OF SERVICES
WORK AUTHORIZATION NO. 01**

**SERVICES TO BE PROVIDED BY the GENERAL ENGINEERING CONSULTANT
(GEC)**

General

The services to be performed by GEC will include, but not be limited to, professional services and deliverables for various tasks related to the study and development of the MoPac South Project, “the Project”. The limits of the services are from Cesar Chavez Street south to SH45 South and also includes the GEC related activities for the MoPac South Intersections at Slaughter Lane and La Crosse Avenue. Because the GEC has no control over the cost of labor, materials, or equipment furnished by others, or over the resources provided by others to meet project schedules, the GEC's opinion of probable costs shall be made on the basis of experience and qualifications as a practitioner of its profession. GEC does not guarantee that proposals, bids, or actual project costs will not vary from GEC's construction cost estimates and/or GEC's projected schedules. No review, coordination or monitoring services by GEC under this Agreement relieve other project participants of their contractual obligations to the Authority or any other party.

In performing its services, GEC shall have the right to rely on materials, information and data provided by other parties. In addition, GEC's services hereunder shall not relieve any other project participant of their contractual duties and obligations to the Authority.

1.0 PROJECT MANAGEMENT & ADMINISTRATION

The GEC will perform internal project management, administrative and coordination duties, including contract administration, reporting, meeting minutes of required meetings, and other related administrative tasks (e.g., direct costs) associated with the GEC's services for the Project, including:

1.1. Contract Administration

Assist the Authority in Preparation of contracts, as required, between the GEC and the Authority, GEC and subconsultants, and the Authority and its subconsultants. Provide assistance to the Authority related to Board approval of contracts. Coordinate the GEC's subconsultant(s) activities, review all work products prepared by GEC's subconsultant(s), review and approve GEC's subconsultant(s) progress reports and invoices.

1.2. Progress Status Reports

Comprehensive Project Progress Status Update Reports will be prepared, as requested by the Authority, and may include but not limited to activities completed, initiated or ongoing, during the reporting period. This includes Project Quarterly Reports and presentations, and preparation and support for Project updates for distribution to stakeholders and the Board of Directors.

1.3. Record Keeping and File Management

GEC shall maintain its internal files and records related to the project throughout the duration of GEC Services.

1.4. Correspondence

Prepare written materials, letters, survey forms, etc. used to solicit information or collect data for the project and submit them to the Authority for review and approval prior to its use or distribution. Copies of relevant outgoing correspondence and incoming correspondence will be provided to the Authority on a continuing basis.

1.5. Schedule Preparation and Update

Prepare a detailed, graphic Master Schedule linking work authorization tasks, subtasks, critical dates, milestones, deliverables, and the Authority/Texas Department of Transportation (TxDOT)/ Federal Highway Administration (FHWA) scheduled review requirements. The project schedule will be in a format that depicts the order and inter-dependence of the various tasks, subtasks, milestones and deliverables for each of the tasks identified therein. Progress will be reviewed periodically, and should these reviews indicate a substantial change in progress, a schedule recovery strategy will be developed collectively with the comprehensive Project team and the schedule will be revised accordingly. Implementation of the recovery schedule may be subject to others (TxDOT).

1.6. Project Reporting/Dashboard Update

Prepare and submit updated project information, including schedule and budget, for the Authority's dashboard on a monthly basis; provide QC review of revised information on website. Assist with the Preparation and, if necessary, submit all documentation related to TxDOT's Local Government Project Procedures and Rider 42 Requirements.

2.0 PROJECT DEVELOPMENT

This scope of services includes professional services and deliverables in support of the Authority's development of the Project from Cesar Chavez Street south to SH45 South.

2.1. Project Development Support

The GEC will provide support to the Authority as required during the Project Development process. Anticipated efforts will include:

- 2.1.1. Loan and/or Grant Applications: Assist the Authority in the development of loan and/or grant applications for the project as required. This will include various elements of the loan and/or grant form and associated documentation for the Authority's review and approval; it will also include participation in the coordination efforts with State and/or Federal agencies as requested by the Authority. (One Application Anticipated)
- 2.1.2. Engineering and Technical Support: Provide various engineering and technical tasks as requested by the Authority including but not limited to: general engineering assistance, general technology assistance, environmental assistance, reports, research, presentations, and meetings.

- 2.1.3. Traffic Modeling: Conduct a peer review of the CORSIM and/or VISSIM Traffic Models and provide summary of review comments. Assist with coordination between consultants.
- 2.1.4. TxDOT, Capital Metro, and FHWA Coordination: Provide appropriate staff as part of coordination efforts between the Authority and TxDOT, Capital Metro, and FHWA. GEC will provide coordination efforts on the Authority's behalf at the direction of the Authority.
- 2.1.5. Traffic and Revenue (T&R) Consultant Coordination: Provide coordination and support to the Authority's T&R Consultant, as directed by the Authority. Conduct peer review and provide summary of review comments.
- 2.1.6. Project Development Agreement (PDA): Assist in the development of the PDA, generation of PDA exhibits, review of PDA drafts, and TxDOT coordination support, as directed by the Authority.
- 2.1.7. CAMPO Coordination: Provide appropriate staff as part of coordination efforts between the Authority and CAMPO. GEC will provide coordination efforts on the Authority's behalf at the direction of the Authority.
- 2.1.8. Provide DBE Outreach as requested by the Authority.
- 2.1.9. Utility and Right-of-Way Support: Support the Authority in its efforts to coordinate future utility relocations and right-of-way acquisitions if needed.

2.2. Financial Planning Support

2.2.1. Project Cost Estimate Updates

GEC will provide opinion of probable total project cost estimate updates for the project. GEC will prepare an estimate of probable construction costs which will include quantity/cost estimates for major components of work such as; roadway paving, roadway earthwork, roadway drainage, bridge structures, retaining walls, other structures, signing and marking, lighting, and signalization. The estimate of probable construction costs will be used to estimate total project costs that will also include program management and oversight, preliminary engineering, final engineering, right-of-way (ROW) acquisition, environmental compliance/mitigation, construction, toll collection systems utility relocation and construction engineering and inspection (CEI), legal, public involvement, and financing costs.

Provide updates to preliminary costs estimate, schedule, financial feasibility analysis necessitated by the on-going project scoping/sizing process.

Incorporate the use of risk-based cost estimating as requested by the Authority.

2.2.2. Operation, Maintenance, and Renewal & Replacement Estimate Updates

- Develop and/or update GEC's opinion of probable operations cost estimates using either a Sketch Level approach (i.e., an assumed per

transaction cost based on average operations costs of similar toll systems) or a Level 1 approach (i.e., estimate actual quantities for the various elements of the toll operations, enforcement and incident management and applying anticipated unit prices to same to develop an opening year cost estimate which can be escalated over time).

- Develop and/or update GEC's opinion of probable annual/routine maintenance cost estimates using either a Sketch Level approach (i.e., an estimated per centerline mile cost based on the facility type which considers the number of lanes, pavement material, and location) or a Level 1 approach (i.e., estimate actual quantities for the various elements of the maintenance efforts and applying anticipated unit prices to same to develop an opening year cost that can be escalated over time).
- Develop and/or update GEC's opinion of probable renewal & replacement budget cost estimates (non-routine maintenance estimates) using either a Sketch Level approach (i.e., an estimated per mile cost based on renewal & replacement budgets utilized on similar facilities) or a Level 1 approach (i.e., includes the identification of a long-term, periodic maintenance/replacement schedule, estimation of quantities for the associated elements, and inflated prices of same to assess the overall cost requirements of the system in the target years).

2.2.3. Toll Feasibility Analysis Updates

GEC will assist the Authority in updating toll feasibility analyses which includes the incorporation of traffic and revenue forecast updates (by others); operations, maintenance, and renewal & replacement estimates; and total project cost estimates to determine the financial feasibility of the project.

2.2.4. Financial Advisor Support/Financial Plan Development

GEC will provide support as requested by the Authority to assist in the financial programming of their system. This will include the development of cash flow analyses which contemplate implementation costs and schedules. GEC will also assist in the identification of priorities for the Project. The tasks will include:

- Assess third party related costs for utility adjustments/relocations.
- If necessary, assist with a system financing plan which may include additional Authority Projects and may require the update and revision of the respective operations and maintenance costs, traffic and revenue studies, and renewal and replacement cost estimates.
- Develop a Funding Contingency Plan should funding for the project as a whole not be provided and determine the impact of various design approaches on estimated project costs and project design life. GEC will:
 - Develop a list of “reasonable” design options for consideration such as project length reductions, ramp reductions, and pavement structure modifications, etc.
 - Meet with the Authority regarding design option concurrence prior to additional analysis.

- Analyze and document the financial implications of the various design options considered and include such things as project cost, schedule impact, local economic impact, length of useful life, operations and maintenance, and impact on financing options.

2.3. Toll Systems Support

The GEC will update the guidelines for the toll collection system for the Project, if required. The toll system will utilize an Electronic Toll Collection (ETC) System (cashless). The GEC will prepare toll facilities guidelines sufficient for the final design consultant to prepare the final design, if required. Input from the Authority will be included regarding the design concept(s). Toll Systems/Facilities Guidelines will include:

- Locate toll systems / facilities on Schematic Design plans.
- Include toll system elements in the Schematic Design:
 - Plan view (Structural, Equipment Enclosures, Large Signs, Striping)
 - Elevations
 - General Sections
- Analysis of:
 - Toll Operations
 - Mechanical and Electrical Operations
 - Provisions for local utilities services
 - Facilities for surveillance, communication and control
 - Conceptual ITS interface and infrastructure
- Layouts for toll gantries
- Outline Specifications
- Opinion of Probable Construction Cost

2.4. Conceptual Operations Plan

Update the existing MoPac Operations Plan to include the Project. The operations plan is intended to establish the basic framework for operations of the facility; including a basic definition of systems architecture for ITS and toll collection, incident management, safety and enforcement, and maintenance. The plan will include the roles and responsibilities of the various agencies. This living document will identify program goals and specific project operational requirements, infrastructure, personnel, operations and maintenance support efforts, and resource requirements.

This task may include coordination with TxDOT, the City of Austin, Travis County, Hays County, TTI, the Authority's Toll Systems Integrator, and the Authority's Toll System Consultant. The Conceptual Operations Plan will include the following specific tasks, as necessary:

2.4.1. Operations Plan Development

Based, in part, on the findings of industry research and the development of “Best Practices” for the operation of toll projects, prepare a preliminary Conceptual Operations Plan which presents the concept for operation of the proposed Project to include:

- Definition of the Operations Concept
- Description of the toll facility
- Description of the Systems Architecture, including
 - Toll Collection System components
 - Communications Infrastructure
 - ITS System and Interface
- Incident Management
- Enforcement
- Facility Maintenance

2.4.2. Interagency Coordination

Assist the Authority in any necessary interagency coordination related to the operations of the Project.

3.0 ENVIRONMENTAL SERVICES

3.1. Environmental Program Oversight

3.1.1 Agency Coordination

Support the Authority in coordination activities with TxDOT Austin District, Consultants, Resource Agencies, TxDOT’s Environmental Affairs Division, and the FHWA, as required; including meeting preparation, public outreach support and attendance at public meetings, hearings, and associated workshops or preparation meetings.

- Monitor the schedule and provide updates to the Authority on a monthly basis.
- Prepare for and attend technical working group meetings and TxDOT meetings

3.1.2 Document Review

- Review draft and final Environmental Documents and provide written comments on such documents.
- Reviews shall be for general conformance to the applicable requirements of TxDOT, Capital Metro, and FHWA, if required. Sources of materials will include data received from TxDOT and other federal, state and local governmental and quasi- governmental agencies and field investigations.

3.1.3 Schematic Design Review

GEC will provide high level review, for general conformance with the design criteria and overall project goals, of the draft and the final schematic design prepared by the Environmental Consultant as well as a high level constructability review. Written comments will be provided for each review. GEC will also coordinate with the Environmental Consultant during the schematic design.

3.2 Evaluation of Park & Ride Locations

The GEC will evaluate the Project Corridor for potential Park & Ride locations. This effort will include Agency and stakeholder coordination. Support the Authority in its efforts to incorporate safe and feasible pedestrian and bicycling connectivity into the Project.

4.0 PUBLIC INVOLVEMENT SERVICES

4.1. Oversight of Environmental-related Public Involvement

Support the Authority in coordination activities with the Environmental Consultant, as required; including:

- material preparation;
- preparation, coordination, participation, and/or attendance at stakeholder meetings, open houses, public meetings and hearings, and noise workshops
- review of public outreach support materials; and
- review of public outreach documentation and reports.
- review and provide response support to public inquiries.

4.2. Enhanced Public Involvement Activities

Support the Authority in comprehensive services in planning, scheduling, developing, conducting, and documenting enhanced public involvement activities, as required; including:

- “Informed Consent”-driven Open Houses
- Elected Official Outreach
- Manage MailChimp File and Elected Official Database
- Stakeholder Outreach and Facilitation
- Produce Project E-Newsletter
- Update Project Website

- Assist in responses to E-Mail Hotline
- Oversee Twitter account
- Rider 42 requirements
- Review Public Involvement Plan Update
- Manage and attend Key Stakeholder Meetings and Elected Official Outreach
- Assist in On-Going Community Outreach
- Review and Provide Project Fact Sheet Updates and Graphic Design

Support the Authority in preparation of media outreach/media briefings, as requested by the Authority. It is anticipated that these services will be primarily handled by the Authority and the Authority's public relations consultant.

4.3. 3D Simulations and Renderings

4.3.1 3D Simulations

Coordination preparation of basic computer simulation(s) of Mopac South.

4.3.2 Renderings

Coordination update of renderings.

5.1 CONTEXT SENSITIVE SOLUTIONS SUPPORT

Support the Authority in its efforts to provide context sensitive design solutions to the Project including:

- Incorporate concepts from the Green Mobility Challenge, as appropriate, including coordination with TxDOT

6.0 FINAL ENGINEERING CONSULTANT SERVICES

6.1 Consultant Procurement

GEC will prepare the deliverables required to complete the procurement of a Design Consultant (DC) to provide Professional Services for final engineering design of the project in accordance with TxDOT's Local Government Project Procedures.

Services include those required to assist the Authority in: the preparation of a Request for Qualifications (RFQ); the issuance of the RFQ; and the receipt and assessment of submitted RFQs. These support activities will consist of the following specific tasks (anticipate one (1) solicitation):

- Working jointly with the Authority, the GEC will develop a RFQ for the Project, post the RFQ as required by the Authority, and provide responses to questions/modifications as may be required during the process.
- The GEC will support the development of evaluation criteria for the RFQ and evaluate the measurable qualifications of each component utilizing the evaluation procedures and formulae. Provide summaries of strengths and weaknesses of all respondents for each component. Participate in meetings with the Authority staff to discuss evaluations of Responses.
- Assist and support the Authority in the development of the short-list of consultant teams.
- Assist in the preparation of questions to be asked by the Authority at the interviews of short-listed consultant teams. Assist the Authority in planning and managing the interviews. Assist the Authority in answering technical questions at the interviews.
- Participate with the Authority in discussions and reviews of the respondents' comments and answers to the Authority questions after interviews. Prepare final written synopses of those responses in a style and format suitable for review and evaluation by the Selection Committee.
- Assist the Authority staff in preparing for and presenting the recommendations of the Committee to the Authority Board of Directors (the "Board"). Prepare and organize all documents, exhibits, and visual aids required for the comprehension of the presentation by the Board.
- Assist the Authority in preparation of a contract between the Consultant and the Authority; including Scope of Services and Fee Negotiations.

[END OF SECTION

ATTACHMENT B - Fee Estimate

MoPac South - WA#1	Sr Engineering Manager (P14)	Sr Supervising Engineer (P13)	Lead Engineer (P12)	Lead Engineer Traffic (P11)	Engineer (P10)	Engineer (P9)	CADD (T9)	Scheduler	Public Involvement (P9)	Administrative Assistant	Lead Utility Coordinator	3D Simulations and Renderings	TOTAL	TOTAL
	K. Creamer	Y. Tassoulas	J. Hamilton	C. Harline	M. Ater	R. Medina	J. Higgenbothan	J. Stuart	I. Cavazos	T. Davidson	D. Whiddon	TBD	HRS	FEE
Estimated Average Labor Rates	\$80.00	\$70.00	\$60.00	\$50.00	\$45.00	\$38.00	\$32.00	\$70.00	\$55.00	\$29.00	\$60.00	\$60.00		
TASK / WORK DESCRIPTION														
MoPac South WA#1														
1.1 Contract Administration	35	35								35			105	\$17,672.66
1.2 Progress Status Reports	35	35							70	35			175	\$28,421.93
1.3 Record Keeping and File Management		35								70			105	\$12,869.55
1.4 Correspondence		35	35							70			140	\$18,732.79
1.5 Schedule Preparation and Update	35	35	35					220					325	\$66,259.35
1.6 Project Reporting / Dashboard Update	35	35	35						70	70			245	\$37,299.72
2.1 Project Development Support	35	280	40	140	140	140	80			105	105		1065	\$154,745.73
2.2 Financial Planning Support	35	140		140	140	280	40			70			845	\$111,623.30
2.3 Toll Systems Support	35	35		140		140				35			385	\$52,070.34
2.4 Conceptual Operations Plan	35	35		140						35			245	\$37,216.80
3.1 Environmental Program Oversight	35	140	350	140	80					35			780	\$126,421.83
3.2 Evaluation of Park & Ride Locations / Bike and Ped Accommodations	4	8		16	16								44	\$6,700.85
4.1 Oversight of Environmental-Related Public Involvement	35	35	70	35					280				455	\$74,267.73
4.2 Enhanced Public Involvement Activities	35	35	35	35					280				420	\$68,404.49
4.3 3D Simulations and Renderings Oversight		70			60				70			280	480	\$78,168.63
5.0 Context Sensitive Solutions Support		35	35						35			140	245	\$41,178.33
6.1 Consultant Procurement	8	80	40	40	80					80			328	\$46,648.76
TOTAL DIRECT LABOR	397	1103	675	826	516	560	120	220	805	640	105	420	6387	
<i>% Total by Classification</i>	6.22%	17.27%	10.57%	12.93%	8.08%	8.77%	1.88%	3.44%	12.60%	10.02%	1.64%	6.58%		
Labor Costs	\$ 31,760.00	\$ 77,210.00	\$ 40,500.00	\$ 41,300.00	\$ 23,220.00	\$ 21,280.00	\$ 3,840.00	\$ 15,400.00	\$ 44,275.00	\$ 18,560.00	\$ 6,300.00	\$ 25,200.00		
Overhead Rate	1.5382	1.5382	1.5382	1.5382	1.5382	1.5382	1.5382	1.7	1.5382	1.7	1.5	1.5		
Overhead Costs	\$ 48,853.23	\$ 118,764.42	\$ 62,297.10	\$ 63,527.66	\$ 35,717.00	\$ 32,732.90	\$ 5,906.69	\$ 26,180.00	\$ 68,103.81	\$ 31,552.00	\$ 9,450.00	\$ 37,800.00		
Profit	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%		
Profit Costs	\$ 8,061.32	\$ 19,597.44	\$ 10,279.71	\$ 10,482.77	\$ 5,893.70	\$ 5,401.29	\$ 974.67	\$ 4,158.00	\$ 11,237.88	\$ 5,011.20	\$ 1,575.00	\$ 6,300.00		
Total Loaded Labor	\$ 88,674.56	\$ 215,571.86	\$ 113,076.81	\$ 115,310.43	\$ 64,830.70	\$ 59,414.19	\$ 10,721.36	\$ 45,738.00	\$ 123,616.69	\$ 55,123.20	\$ 17,325.00	\$ 69,300.00		\$ 978,702.79
<i>% Total by Class</i>	9.06%	22.03%	11.55%	11.78%	6.62%	6.07%	1.10%	4.67%	12.63%	5.63%	1.77%	7.08%		
Total Direct Expenses	\$ 20,000.00													
Total	\$ 998,702.79													