

Scope of Work
Travel Demand Model Support Services
SELATRAM Model Retainer
RPC Task A-1.21; FY-21 UPWP

Project Description

The purpose of this contract is to provide technical services to the RPC as needed in the maintenance, update, and use of the transportation demand model and associated analytical software used for long-range strategic planning, and other transportation and land use related tasks. This model, the Southeast Louisiana Travel Model (SELATRAM v9.3) is used to perform capacity deficiency analysis, future year demand analysis on multiple scenarios, and evaluation of individual needs in study areas over time up to a planning horizon year in a geospatial database format. The travel demand forecasting model used by the RPC was developed in the TransCAD 7.0 environment by Caliper Corp., Newton, Massachusetts, in GISDK scripting language with JAVA, Python, and R subroutines embedded in the model stream.

Scope of Services

The services of the Consultant are outlined in this exhibit by task and will consist of the following:

Task 1 – Editing of Network and Data Files

Existing model encompasses a nine parish geographic area in and around the New Orleans region, with 1000 traffic zones and 34 external stations. Network contains 12,200 links, and encompasses a 9,143 sq. mile area of southeast Louisiana. Consultant will provide RPC staff with timely support and assistance on the updating and editing of data input files, highway and transit networks, completing assignment runs, and otherwise augment RPC staff resources as directed.

Task 2 – Model Maintenance

Consultant will assist RPC staff in model maintenance tasks, such as revising and improving the graphical user interface, updating GISDK batch files, and streamlining work process algorithms. All changes would require thorough documentation and incorporation into existing model documentation. Consultant will support model-related troubleshooting tasks as directed.

Task 3- “Big Data” Integration

As part of RPC’s ongoing efforts to improve the travel modeling capacity of SELATRAM 9.3, RPC intends to procure passively collected travel data (“big data”) to enhance validation efforts. Consultant will work with RPC staff to provide guidance and technical support for the integration of “big data” resources to support model validation, and associated tools and processes related to refined calibration methodologies of the SELATRAM.

Task 4 – Model Setup and Updates

Provide RPC staff assistance in loading SELATRAM in TransCAD software programs and updates on local computers as necessary. Consultant will interface with Caliper technical support as directed and as

necessary. Consultant will work with RPC personnel and Caliper Technical support on integrating SELATRAM 9.3 into TransCAD updates as feasible.

Task 5 – Training of Staff Members

Provide training and related technical assistance to RPC staff in the use of SELATRAM, in the TransCAD environment as directed.

All tasks will be initiated and tracked by task order via directive of the Deputy Director at RPC, or his designee. Timesheets of billed hours will be required to be submitted with monthly invoice.

Requirements:

Consultant must demonstrate having a thorough understanding of TransCAD GISDK, ESRI Shapefiles, JAVA, Python. Must demonstrate experience in four step model development in large urban areas.

Deliverables:

Consultant shall prepare a technical memorandum summarizing the work undertaken on the model. Changes to the model and any process thereto will be documented as an addendum in the User's Guide for the model.

Contract Time

This contract period of services for the services as described herein shall not exceed 12 months.

Budget

The total maximum budget for accomplishing all the tasks in this scope of work is \$30,000.