CITY OF PORTSMOUTH, NH

RFP 23-17

REQUEST FOR PROPOSALS

ENGINEERING SERVICES

DOWNTOWN TRAFFIC MODELING

The City of Portsmouth is requesting proposals from qualified consultants to prepare a Downtown Traffic Model.

Specifications and Request for Proposal forms may be obtained by visiting the Finance/Purchasing Department section of the City of Portsmouth website at www.cityofportsmouth.com/finance/purchasing.htm.

Sealed Proposals, plainly marked "RFP 23-17, Engineering Services, Downtown Traffic Modeling" on the outside of the mailing envelope, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, NH 03801 will be accepted until **2 p.m. on January 19, 2017**.

Requests for additional information should be directed in writing to Eric Eby in the City of Portsmouth Public Works Department at ebeby@cityofportsmouth.com. The **deadline for questions and requests for additional information is January 5, 2017**.

Addenda to this RFP, if any, including written answers to questions will be posted on the City of Portsmouth website under the project heading.

If you have administrative questions please contact the Finance/Purchasing Department at the following number: (603) 610-7227.

The City of Portsmouth reserves the right to reject any or all proposals, to waive technical or legal deficiencies, and to accept any proposal that it may deem to be in the best interest of the City.

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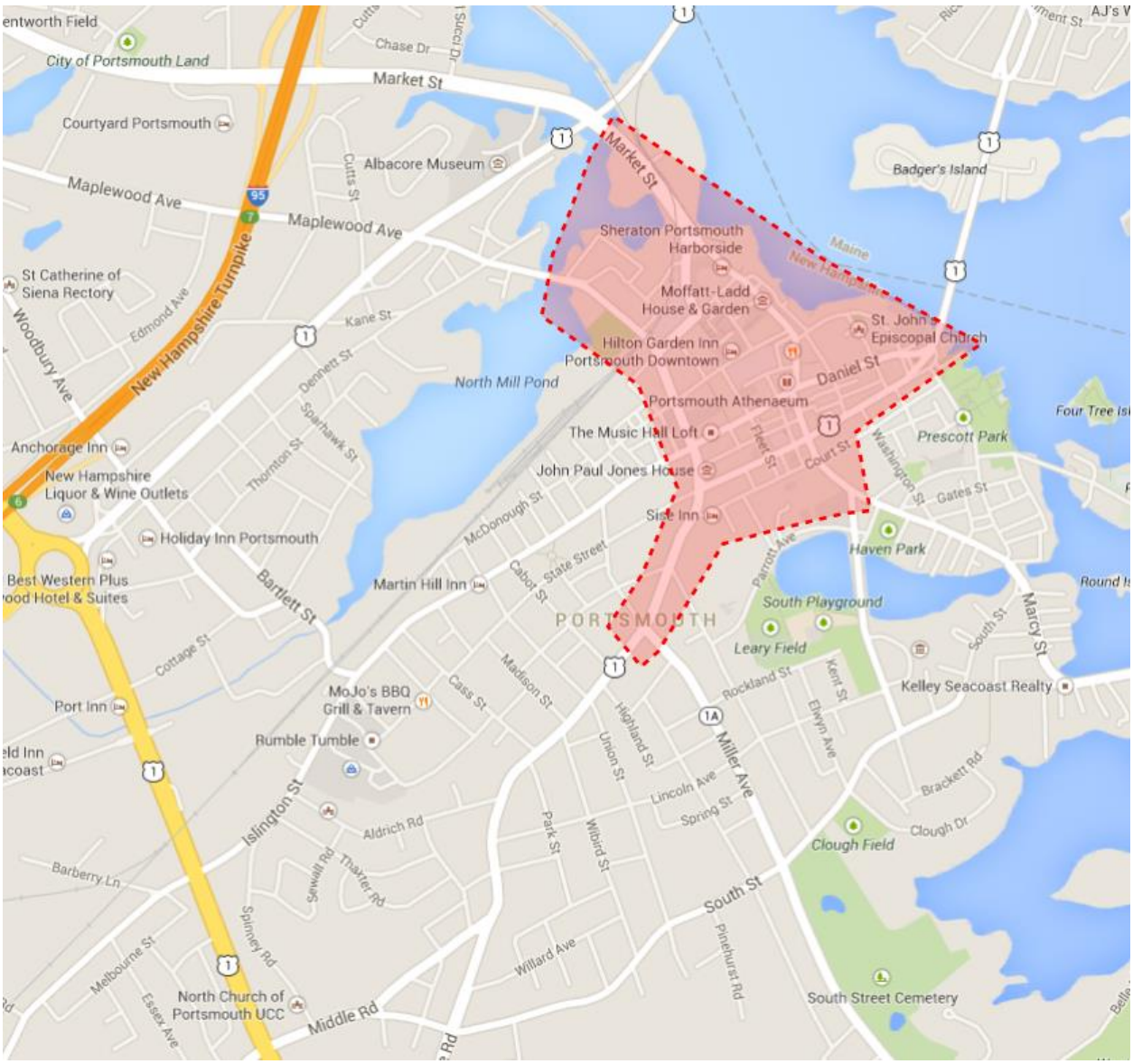
PROJECT BACKGROUND

The City of Portsmouth is a historic New Hampshire port city settled in 1623. It is a compact community (16 square miles) of 21,000 residents situated directly off of Interstate 95 on the Maine/New Hampshire border. Portsmouth has a reputation as a highly desirable place to live, work, and recreate due to a variety of factors. The City has a rich history, reflected in its many remaining historic properties as well as its public spaces. It has a vibrant downtown with a concentration of retail and restaurant establishments, accommodations, civic and religious uses, performance spaces and cultural institutions, as well as a mix of residential types. Commercial areas outside of the downtown continue to thrive, as well, and building permit applications for new development and redevelopment of all types continue to be submitted at a steady pace. Portsmouth is a regional employment hub with over 250 businesses located at Pease International Tradeport alone, along with a number of medium to large-size enterprises located throughout the City.

Given the increasing traffic demands in the downtown area, the dynamic nature of development activity and traffic patterns in the City, and an interest in better managing traffic flows and parking in the downtown, the City of Portsmouth is requesting proposals from qualified consultants to develop a detailed microsimulation model of downtown Portsmouth (see Figure 1). It is expected that the model will include all arterials, collectors, and major local streets within the identified study area. This model will be used to project traffic impacts to roadways and intersections associated with (but not limited to) roadway infrastructure improvements, new developments, road closures, modifications to street directionality, and changes to parking facilities.

The Portsmouth Downtown Traffic Model will be an origin/destination traffic microsimulation model that reflects the existing roadway network, land uses, and existing traffic demands in the study area shown in Figure 1. The model will be calibrated to existing year (2017) evening peak hour traffic flows and will accurately represent existing roadway and lane geometrics, speeds, and signal phasing, as well as major pedestrian crossings within the study area.

FIGURE 1: PORTSMOUTH DOWNTOWN TRANSPORTATION MODEL LIMITS



Land use information including the location and magnitude of residential uses, employment centers, retail destinations, and major parking areas shall be considered in determining the model's traffic generation characteristics.

The Portsmouth Downtown Traffic Model shall be developed in coordination with the existing Seacoast Regional Transportation Model, which shall be used as a starting point for the microsimulation model's origin/destination data. Further calibration of the Portsmouth Downtown Traffic Model shall be based on current traffic data to be collected for this project. The amount of traffic count data required to achieve calibration may vary based on the full extent of the model to be determined in partnership with City staff.

The Portsmouth Downtown Traffic Model will be used to project traffic impacts to roadways and intersections associated with potential roadway improvements, intersection upgrades, traffic flow changes, road closures, and new developments. Additionally, capabilities shall be provided to

analyze air quality emissions impacts associated with potential analysis scenarios. This linkage to air emissions modeling will be used to test potential improvement projects and support applications for Congestion Mitigation and Air Quality (CMAQ) funding.

SCOPE OF WORK

The Consultant's role will be to carry out the scope of work described below to develop a calibrated base year evening peak hour microsimulation model for use in assessing potential transportation initiatives in Portsmouth. The proposal should clearly identify the method for documenting or illustrating the deliverables for each task. The Consultant may modify the desired scope of work presented below if, based on their professional expertise and knowledge, they can provide an approach that will more effectively address the goals of this project; however, the consultant shall identify and explain any modifications to the requested scope.

Task 1: Project Management, Preparation, and Communication

It is anticipated that the consultant shall establish a clear and consistent communication framework for the duration of the project. The consultant shall coordinate and attend two project meetings with City staff and one final public meeting to present the calibrated traffic model.

1. Project kick-off meeting to introduce the project, finalize schedule, establish project goals, and commence technical work. Agenda items for this meeting include discussion of full model geographic extent, appropriate analysis period, data collection needs, and the model roadway network at this meeting.
2. Project progress meeting at a point near or following model calibration.
3. Public Presentation.

Task 2: Data Collection

The consultant will be responsible for collecting all traffic volume, roadway and lane geometrics, and intersection control data necessary to construct the microsimulation model. This will include up to 30 peak period turning movement counts and parking utilization counts on up to 10 City blocks to supplement existing data. The consultant is also responsible for collecting data on roadway speeds, lane designations, intersection controls, and signal timings.

City staff will provide the consultant with the amount of parking per Traffic Analysis Zone (TAZ) in the core downtown area as well as information on the major employment centers (number of jobs or building square footages) and the number of housing units per TAZ.

Task 3: Model Development & Calibration

The consultant shall develop an origin/destination based traffic microsimulation model for the project study area using the TransModeler microsimulation software program, which can be integrated with the existing Seacoast Regional Transportation Model, which runs in the TransCAD software platform.

Origin/destination data for the Portsmouth Downtown Traffic Model shall be initially based on outputs from the Seacoast Regional Transportation Model and shall be further calibrated to national standards for microsimulation modeling using specific land use information and current traffic counts within the study area.

The consultant shall develop a Traffic Analysis Zone (TAZ) structure that adequately captures the complexities of traffic generation in downtown Portsmouth, with sufficient model centroids to

accurately calibrate key intersections and simulate the effects of on-street parking. The consultant shall prepare and submit a map of the proposed TAZ structure indicating the locations of all centroids and centroid connections for review and approval by City staff before proceeding with development of the model.

The consultant shall prepare a calibration summary documenting the model's performance in relation to nationally recognized indicators for microsimulation model calibration. The model must accurately represent the downtown roadway network including road classifications, speeds, lane designations, intersection controls, and signal phasings and accurately replicate existing traffic flows within the study area within acceptable limits.

Task 4: One-Way To Two-Way Traffic Conversion Analysis Scenario

Upon completion of the final calibrated base year Portsmouth Downtown Traffic Model, the consultant will perform an analysis of the benefits, impacts, and feasibility of converting the major one-way streets in the downtown area to two-way traffic flow. The streets to be included in this analysis are Congress Street, State Street, Daniel Street and Pleasant Street. The results of the analysis, along with recommendations, shall be presented to the Parking and Traffic Safety Committee.

Task 5: Final Report

Upon completion of the final calibrated base year Portsmouth Downtown Traffic Model, the consultant will document significant factors and assumptions made during model development and summarize overall model calibration in a final report to be issued to the Department of Public Works. The report will compare model performance with nationally recognized indicators for calibration. The report will also outline the model's capabilities for future project analysis and will indicate methods for integrating model results with state of the practice air quality emissions modeling.

PROJECT DELIVERABLES

- The Proposal shall specify the deliverables by task.
- One (1) reproducible hard copy and (1) electronic copy each in Adobe PDF and MS Word format of interim drafts and final report including narrative and graphics.
- Any maps and supporting map data prepared by the consultant for the report, shall be provided in GIS format compatible with ArcMap 10.0 and should be referenced to the coordinate system in NH State Plan, NAD83 (1996) with units in feet.
- Spreadsheets and charts in MS Excel format including support data for all tables and graphs included in the report.
- All information, data, documents, photos, computer records, and other materials of any kind acquired or developed by the consultant pursuant to this project shall be the property of the City of Portsmouth.

PROJECT SCHEDULE

The selected consultant shall be expected to begin work within two weeks of contract signing and complete all tasks in their entirety within 9 months of contract signing.

CITY ROLE

Public Works Department staff will be responsible for administering the project and overseeing the consultant's work on this project. City staff will provide information on related studies and planning initiatives and will make available the City's GIS data layers that have relevance to the project scope. Public Works Department staff will be responsible for planning and facilitating public meetings and other community outreach related to this planning process. Printing and mailing costs associated with public communications shall be the City's responsibility.

SUBMITTAL REQUIREMENTS

Proposals shall include the following and shall be organized using each of the elements listed below as section headings:

A. Firm Description: Provide a brief description of the firm including firm size and area of specialization, location of corporate headquarters, and location of office proposed to handle this project.

B. Project Team: Provide names, resumes, and office locations of key staff who will be assigned to the project. Each team member's education and qualifications shall be listed. The project manager shall be clearly identified. If different consultants will be teaming together, indicate the lead consultant.

C. Project Understanding: Provide a statement summarizing how the consultant and/or project team is particularly qualified for this project.

D. Scope of Services: Describe the consultant's approach and technical plan for accomplishing the work listed herein. The Consultant is encouraged to elaborate and improve on the tasks listed in the RFP; however, the consultant shall not delete any requested scope tasks.

E. Project Schedule: The Consultant shall submit a schedule, itemized by task, for completing the scope of work.

F. Project Budget: The Consultant shall submit a proposed project budget itemized by task and total project cost stated as a firm fixed fee. Labor and direct costs should be identified by task. Hourly rates for project staff shall also be provided.

G. Comparable Projects: Description of related project experience and role of key staff in each project.

H. References: Three (3) references, including current contact name and phone number for similar projects.

Submittals shall be printed on two sides of the page and shall not have a plastic cover. Four hard copies and a digital copy of the proposal in a searchable PDF format shall be submitted.

EVALUATION CRITERIA

Proposals will be evaluated according to the following:

1. Responsiveness to submission requirements. 10 points
2. Qualifications of firm and project team members. 20 points
3. Previous related work and references. 30 points
4. Strength of proposed scope of services. 30 points

5. Project budget. 10 points

The City, at its discretion, may select a firm outright or select one or more finalist(s) for in-person and/or telephone interviews.

CONTRACT DOCUMENT

Upon selection, the highest ranking firm will be invited to enter into contract negotiations with the City. When the contract is executed by both parties, the Consultant will be instructed to commence providing the work outlined in the contract. All information, data, documents, photos, computer records, and other materials of any kind acquired or developed by the consultant pursuant to this project shall be the property of the City of Portsmouth. If the City is unable to reach agreement with the highest ranking firm, the City may enter into negotiations with the next highest ranking firm.

ADDITIONAL INFORMATION

Questions and requests for additional information should be directed in writing to Eric Eby in the City of Portsmouth Public Works Department at ebeby@cityofportsmouth.com. The deadline for questions and requests for additional information is January 5, 2017. Answers will not be sent directly to interested parties. Written answers to questions will be posted on the City of Portsmouth Finance/Purchasing Department's website under the project heading in the form of an addendum.

INDEMNIFICATION AND INSURANCE REQUIREMENTS

The Contract will require the Consultant to agree to pay on behalf of and hold harmless the City of Portsmouth for all claims arising in whole or in part from its work on behalf of the City.

Consultant will be required to maintain insurance in such form as will protect the Consultant from claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract. Consultant shall also be required to maintain professional liability insurance. Amounts and coverages shall be subject to contract negotiations.

RESERVATION OF RIGHTS

The City reserves the right to negotiate a contract for specific tasks identified in this scope of work depending on funding availability.

The City of Portsmouth reserves the right to reject any or all submittals, to waive technical or legal deficiencies, to proceed or not to proceed with any subsequent proposal process, or to negotiate without further process any contract as may be in the best interest of the City. The City reserves the right to negotiate directly with the firm(s) selected for additional project work including construction administration services, and/or additional project engineering and design services, and future updates to the traffic model.

The City further reserves the right to undertake such investigation as it deems necessary to evaluate the qualifications of the Consultant and to evaluate its submittal. Firms may be asked to submit releases as part of the investigation and review of qualifications. Failure to provide a release if requested will result in disqualification. All concepts, designs, information and cost-savings ideas that may be generated during the selection process shall become the property of the City of Portsmouth.