



Town of Londonderry
New Hampshire

Planning and Economic
Development Department

2017

**RFP/RFQ Documents for Town-Wide Geo-Referenced
Oblique/Orthogonal Imagery and LiDAR Mapping
Project**

Copy No. _____

Request for Qualifications and Proposal

Town-Wide Geo-Referenced Oblique/Orthogonal Imagery and LiDAR Mapping Project

Offered by: Department of Planning and Economic Development

RFP/RFQ Coordinator: John Vogl GIS Manager /Comprehensive Planner

ACCEPTANCE DEADLINE: 12:00 Noon, Wednesday January 18th, 2017.

BID OPENING TIME & LOCATION: 2:00 pm, January 18th, 2017 Elwood Conference Room
Londonderry Town Hall 268B Mammoth Road Londonderry, NH 03053

Sealed Envelopes Must be Marked "RFP/RFQ: TOWN-WIDE IMAGERY and LIDAR MAPPING UPDATE" on the outside of the mailing envelope, addressed to the Town of Londonderry, NH Department of Finance, 268B Mammoth Road, Londonderry, NH 03053.

I. Project Area

The project area includes the entire Town of Londonderry, New Hampshire and 500-feet beyond town borders. Londonderry, a suburban community in southern New Hampshire, is approximately 42 square miles and is located 40 miles north of Boston. The Manchester-Boston Regional Airport is located in Londonderry. The figure on the following page provides a general map of the Project Area.

II. Scope of Work

Work to be performed under any contracts issued as a result of this RFP/RFQ will support the acquisition of aerial photography and elevation data. Specifically, such work will fulfil the following objectives:

- 4-inch GSD Oblique 4-way images (town-wide);
- 4-inch GSD Mosaic True Orthogonal frame image (town-wide) delivered to the Town in georeferenced Tiff and SID formats;
- LIDAR 0.7M posting, first return in tiled LAS format;
- LIDAR 0.7M posting, bare earth return; vertical accuracy to support 1 to 2' contours in tiled LAS format;
 - *The Town will entertain an alternative flight with fewer returns, suitable to develop 2' contours, should it be necessary to reduce project costs.;*
- DEM and 1-foot or 2 foot contour interval mapping in ESRI Geodatabase format;
- Hydrographic Breaklines and Hydrographic Features in ESRI Geodatabase format;
- Ground control and data documentation including a ground control report and control diagrams;
- Metadata on all ESRI Geodatabase products ;
- Cloud hosting of oblique imagery and demonstrated integration with existing community GIS tools including the ESRI ArcGIS platform and Applied Geographics' Inc. MapGeo;
- Demonstrated ability to perform comparative analysis of images captured in this flight and in previous flyover projects.

The study area shall consist of the entirety of the Town of Londonderry, approximately 42 square miles, including approximately 500' buffer outside of boundaries. All maps and databases shall be prepared in formats suitable for viewing/editing in ESRI ArcGIS version 10.4 and in File Geodatabase format. The final design of ESRI-based deliverables will be agreed to by the Town and the selected Contractor however it will be similar to the layer design provided in Table 1. The imagery will be free of clouds, cloud shadows, atmospheric haze, and sun glare reflections. The imagery should be captured during the Spring of 2017. The Contractor will capture the imagery at a minimum sun angle of 45 degree, while deciduous vegetation is free of leaves, when rivers and streams are within their normal banks, and the ground is free of snow and excessive moisture. The Contractor will, immediately subsequent to the aerial photography capture, inspect it for cloud shadow, color, exposure, and clarity, as well as sidelap, endlap, and crab. The Contractor will provide a quality control summary report within a reasonable time after the date of photography. The report will describe conditions during the flight (including but not limited to: flight date, aircraft used, weather conditions, altitude, sub-contractors, scales, resolutions, camera type, number of flight lines, number of tiles created and datum utilized in both hardcopy and digital format.) The imagery will be delivered via a tiling scheme provided by Town in both GeoTiff and MrSID formats. The contractor shall deliver a true orthorectification, free from seam lines, which has been fully color balanced. The contractor shall be responsible for establishing and surveying both horizontal and vertical control required to develop mapping that meets Class 1 ASPRS standards for 1"=100' scale mapping. If adequate, Airborne GPS can be used on this project. The contractor shall state the number of ground control points that will be acquired in the proposal.

DEM tiles will show no edge artifacts or mismatch. A quilted appearance in the overall project DEM surface, whether caused by differences in processing quality or character between tiles, swaths, lifts, or other non-natural divisions, will be cause for rejection of the entire DEM deliverable. Void areas (i.e., areas outside the project boundary but within the tiling scheme) shall be coded using a unique "NODATA" value. Water Bodies (ponds and lakes), wide streams and rivers ("double-line"), and other non-tidal water bodies as defined in Section III are to be hydro-flattened within the DEM.

One (1) foot, two (2) and ten (10) foot contours lines shall be continuous and shall conform to the database design outlined in Table 1. All contours shall be continuous. Where contours intersect with buildings, the contour line shall continue through the building. The section of contour that resides inside the building shall be "cut out" and identified as a separate feature as described in Table 1. Every interval divisible by ten will be an index contour and should be clearly distinguishable as such. All contours are to be clearly distinguishable and attributed with their elevations given in full feet.

Hydrologic features shall be continuous and shall conform to the database design outlined in Table 1. Where water features are directed under roadways or structures, the feature line shall continue through the apparent pipe course. The section of a waterway that resides beneath the structures shall be identified as a separate feature as described in Table 1.

All existing base data from previous flights shall be made available to the contractor for use in this project.

The Town retains the option to modify the Scope of Services in order to stay within the Department's available budget and achieve the most cost-efficient return for the community.

Table 1: Minimum Geodatabase Design

Description	Layer	Topology	Comments
Rivers	WAT_RIVER	Line/ Polygon	Collect all rivers.
Streams and Brooks	WAT_STREAM	Line/ Polygon	As visible. Use double lines of width greater than 0'.
Intermittent Streams	WAT_STREAM_INT	Line	Visible intermittent streams.
Ponds and Lakes	WAT_POND WAT_POND_PT	Polygon	Closed, permanent bodies of water.
Index Contours	TOPO_IDX_CON	Line	Indicate all index contours.
Index Contour Cut Outs	TOPO_IDX_CUT	Line	Indicate all contour cut outs (contours that run through buildings)
Intermediate Contours	TOPO_INT_CON	Line	Indicate all intermediate contours
Intermediate Contour Cut Outs	TOPO_INT_CUT	Line	Indicate all contour cut outs (contours that run through buildings)
Approximate Intermediate Contours	TOPO_INT_APP	Line	Indicate all approximate intermediate contours
Approximate Index Contours	TOPO_IDX_APP	Line	Indicate all approximate index contours

III. Minimum Evaluation Criteria

The Town wishes to receive proposals that contain the minimum information necessary to fully respond to the requirements herein. The following are minimum and comparative evaluation criteria. These criteria, along with other factors, will be used as the basis for evaluating proposals. All proposals must clearly state responses to each evaluation criteria item, must provide appropriate justification and associated contact names, and must describe where in the proposal associated information can be obtained. Respondents must meet the following minimum evaluation criteria in order to be considered responsive to this RFP/RFQ.

Respondents that do not meet these criteria will not be eligible for contract award.

- Vendor must have been providing photogrammetric mapping services as a principal business for at least 5 years.
- Vendor must have completed at least 3 projects that involved the capture of oblique imagery or similar projects.
- Vendor must have completed at least 3 projects that involved the capture of LiDAR and derivatives including DEM or similar projects.
- Contractor must describe integration options with the Town's MapGeo services.
- Proposal clearly states QA/QC procedures that will be used to ensure the quality of all deliverables.
- Vendor has provided all items as described in the RFP/RFQ.

IV. Format of Proposals

The Town wishes to receive clear, concise proposals that contain information necessary to fully respond to the requirements herein. Proposals shall include the following, presented in the order specified. One original and three copies of the technical proposal are required. One sealed copy of the price proposal shall be included under separate cover.

1. **Letter of Transmittal:** (1 page maximum) Letter of Transmittal indicating who in the firm is authorized to negotiate and execute an Agreement for this work, and, including the following statements:
 - Agreement to incorporate both this RFP/RFQ and the proposal into an Agreement to be negotiated in good faith, and intended to be executed by Spring 2017.
 - Statement of where production work will be performed.
 - Statement that the firm will commence with aerial photography during the Spring 2017 window upon notice-to proceed.
 - A brief summary of the Firm's financial status.
2. **Introduction:** (1 page maximum) Introduction to the project including the following: Brief history of the firm. Brief project approach.
3. **Scope of Services:** (3 page maximum) Outline of scope of services to include the following: A list of any exceptions or clarifications to the scope of work as outlined in Section I. A brief, concise scope of work for the following: Aerial Photography – aerial camera, photo scale, flight height, flight lines, exposures, film type, overlap, flight timing, sun angle, flight specifications; Ground Control – number of control points, datum, process, and FAAT; Topographic Mapping – Statement of Accuracy and basic scope; Hydrographic Mapping – Statement of Accuracy and basic scope; Geodatabase Formatting – A clear, concise description of any alternative approaches; Public Access Tools – A summary description of tools available for public viewing and integration with existing Town GIS resources with any recurring access costs identified; Schedule for each task.
4. **Staffing:** (1 page maximum) Project Staffing Plan which will include the following:

Proposed project manager and principal-in-charge. Listing of all proposed subcontractors to be utilized on the project and their proposed roles.
5. **Qualifications:** (8 page maximum) Statement of qualifications related to this project
 - Project descriptions for up to five similar municipal oblique/orthographic mapping, topographic mapping, and digital orthophotography projects.
 - References for the projects provided.
 - Quality Control Procedures
6. **Minimum Evaluation Criteria:** (3 page maximum) Response to all items listed in Section III of this RFP/RFQ with associated references for all projects listed.
7. **Additional Information Appendix:** Statements or information that the respondent wishes to provide to strengthen his/her proposal with regard to the selection criteria.

- 8. Price Proposal:** Proposal shall include the bid form as attached and include it under separate cover. Any alternative proposals shall be submitted on a separate price proposal. Proposal shall clearly state the price for each task.

Costs provided shall be valid for a period of six months from proposal opening and are subject to Town funding approval.

V. Contact Information and Proposal Submittal

Questions shall be directed to:

John Vogl, GIS Manager/Comprehensive Planner
268B Mammoth Road
Londonderry, NH 03053
603-432-1100 x128
jvogl@londonderrynh.org

No pre-proposal meeting will be held. Proposers are encouraged to email with questions.

Proposals and bids are due no later than 12:00 noon on **January 18, 2017**, preferably by registered mail. Proposals shall be addressed to:

Town of Londonderry
Department of Finance
268B Mammoth Road
Londonderry, NH 03053

All bids must be submitted in sealed envelopes addressed to the Finance Dept. Purchasing Agent bearing on the outside, the name of the bidder, their address and the note "TOWN-WIDE IMAGERY and LiDAR UPDATE".

VI. Selection Criteria

The contract will be awarded to the responsive contractor submitting the most advantageous proposal to the Town of Londonderry. Prior to selecting a firm, the staff may contact and schedule interviews with one or more selected firms. The staff reserves the right to discuss bid price and scope and negotiate the bids with prospective consultants prior to awarding the contract. The Town reserves the right to reject any or all submittals, or any portion of submittals, or to waive any formalities that are determined not to be in the best interest of the Town.

VII. Schedule

Project schedule is estimated to be as follows:

1. RFP/RFQ Available **12/23/2016**.
2. Proposals Due **1/18/2017, 12:00 noon. Bid Opening 1/18/2017. 2:00 pm.**
3. Approximate Notice to Proceed **2/1/2017**.

Copies of this document may be picked up at the Londonderry Department of Planning and Economic Development, 268 B Mammoth Road, Londonderry, NH or mailed upon request.

All bids must be received in the Finance Department office at 268 B Mammoth Road by 12:00 noon on January 18, 2017. Bids submitted after this time will not be accepted. At 2:00 PM all bids will be publicly opened and read aloud.

Town of Londonderry, New Hampshire

**Town-Wide Geo-Referenced Oblique/Orthogonal Imagery and LiDAR Mapping
Project Bid Sheet**

Scope items.		Comment
Oblique Aerial Photography	\$ _____	
Orthophotography Only	\$ _____	
LiDAR Flight for 1' Contour Interval	\$ _____	
Alternative LiDAR Flight for 2' Contour Interval	\$ _____	
LiDAR Feature Extraction (Hydro/topo)	\$ _____	
User Access/Cloud Hosting	\$ _____	
Total Project Cost	\$ _____	