

DELAWARE SPATIAL DATA I-TEAM

REQUEST FOR PROPOSALS

Delaware Statewide LIDAR Project

January 27, 2003

This package contains a Request for Proposals for a statewide Delaware LIDAR Project. This Request for Proposals contains the following sections:

1. Introduction
2. Background Information
3. Requirements/Special Provisions
4. Project Guidelines
5. Specific Proposal Requirements
6. Basis of Contract Award

Attachment

Non-collusion statement and acceptance

Responses are due in the Delaware Office of State Planning Coordination no later than **4:30 p.m. EST, on February 18, 2003 (Note: Clarified on 2/5/03 to account for State Holiday on 2/17/03)**. Bidders shall submit five (5) copies of the proposal, in sealed envelopes with the name and words "Proposal: Delaware Statewide LIDAR Project."

Please review and follow the information and instructions contained in the general and special provisions section of the Request for Proposals (RFP). Should you require additional information, please contact Mike Mahaffie, at the Delaware Office of State Planning Coordination, at (302) 739-3090.

I. INTRODUCTION

The Delaware Statewide LIDAR Project is intended to serve as a vehicle for the state of Delaware to collect high-resolution elevation data for the whole of the State of Delaware. This is part of a larger effort of the Delaware Spatial Data Implementation Team (I-Team) to improve the spatial data resources of the State of Delaware. It will become the elevation portion of the Delaware Spatial Data Framework and will be made available without restriction of the public via the Delaware Data Mapping and Integration Laboratory (DataMIL) at datamil.udel.edu.

More specifically, this project is intended to enable improvements in the Flood Hazard Maps for the State, support the efforts of the USDA Natural Resources Conservation Service, and enhance other data collection and resource management activities by local, state and federal agencies.

This project is to be planned on a statewide basis and implemented on a sub-state, regional basis as funding is available.

The lack of accurate high-resolution elevation data has been a limiting factor in performing economically feasible flood studies in Delaware. Flood studies using existing topographic data of 5- and 10-foot contour intervals have proven problematic for residents and are not accepted by the Federal Emergency Management Agency (FEMA) as "detailed" flood studies.

LIDAR (LIght Detection And Ranging) can provide reasonably cost-effective and accurate elevation data. Elevation data acquired using LIDAR can be used to perform flood hazard studies that meet FEMA guidelines. The Delaware Department of Natural Resources and Environmental Control (DNREC) has identified areas in which existing flood hazard maps are inaccurate and where flood events have damaged buildings in areas that are currently not mapped as flood-prone.

LIDAR will be used to develop elevation data that meets or exceeds FEMA guidelines for flood hazard study contractors at least in areas with known flood hazard mapping errors or omissions. Priority will also be given to areas in which elevation data will be valuable for uses other than flood hazard mapping (i.e. soil mapping or drainage studies).

Interested vendors should submit five (5) copies of detailed proposals, including detailed, itemized cost estimates, to the Delaware Office of State Planning Coordination, at the address below, **by 4:30 p.m. EST, on February 18, 2003 (Note: Clarified on 2/5/03 to account for State Holiday on 2/17/03).**

Delaware Office of State Planning Coordination
Third Floor, Suite 7
Thomas Collins Building
540 S. DuPont Hwy.
Dover, Delaware 19901

Further information on the proposed project is below. You may also contact Mr. Mike Mahaffie, at (302) 739-3090, or by e-mail at mike.mahaffie@state.de.us, for further information.

II. BACKGROUND INFORMATION

Flood hazard mapping has been done in Delaware comprehensively since the early 1970s. Despite this, there are still many watersheds in all three Counties that have not had flood hazards identified, or have been mapped using rudimentary approaches. As a result, development continues to occur which is vulnerable to flood damage and flood events routinely exceed or deviate from mapped flood hazard areas.

The Federal Emergency Management Agency recognizes these shortcomings and has a national program aimed at floodplain map modernization. FEMA recognizes that state and local governments are natural partners in this effort. The Delaware DNREC is a Cooperating Technical Partner (CTP) with FEMA and has performed limited flood hazard mapping in the past with funding from FEMA.

In addition, accurate, large-scale elevation data be created based on data collected in the proposed LIDAR project is an important part of the Delaware Spatial Data Framework. The Framework provides a common base map and organizing principal for all spatial data activities within the state of Delaware.

III. REQUIREMENTS/SPECIAL PROVISIONS

A. Nature of Contract, Term

The contract is for services with an independent contractor, a joint venture, or an innovative partnership. It is anticipated that the contract will be executed over an indefinite period of time beginning in the late winter or spring of 2003 and continuing as funding is available. The Delaware I-Team will make a final determination on the contract period during negotiations with the intended contractor.

B. Funding

The contract will be contingent on available funding. The contract will include a plan for data acquisition statewide to be carried out in parts, as funds are available. Funding to begin this project by acquiring data for the Inland Bays Watershed is available through a federal grant. Other agencies may contribute funding, based on need and availability. No portion of the project shall go forward if funding for that portion is not available.

C. Bond Requirement

No bonds are required.

D. Bid Opening

All responses must be received no later than 4:30 p.m. EST on February 18, 2003 (Note: Clarified on 2/5/03 to account for State Holiday on 2/17/03). Late submission is cause for disqualification.

E. Notification of Acceptance

All bidders will be informed of the decision in writing.

F. Cost of Proposal Preparation

All costs of proposal preparation will be borne by the bidding consultant(s).

G. Subcontracting

If a subcontractor is going to be used, this must be specified in the proposal. Information pertaining to the identification of the subcontractor, the service(s) to be provided and qualifications s to provide such service(s) must accompany the proposal.

H. State of Delaware Business License

Prior to receiving an award, the successful firm shall either furnish the I-Team with proof of a State of Delaware business license or initiate the process of application where required. An application may be requested in writing from: Department of Finance, Division of Revenue, Carvel State Office Building, 820 North French Street, Wilmington, Delaware or by telephone to one of the following numbers: (302) 577-8240, or (302) 577-8238.

Information regarding the award of this contract will be given to the Division of Revenue. Failure to comply with the State of Delaware licensing requirements may subject the organization or person to applicable fines and/or interest penalties.

I. Hold Harmless

The successful bidder agrees that it shall indemnify and hold the State of Delaware and all its agencies harmless from and against any and all claims for injury, loss of life or damage to or loss of use of property caused or alleged to be caused, by acts or omissions of the successful bidders' performance, or failure to perform as specified in the Agreement.

J. Exceptions

Bidders must meet the minimum requirements set forth in the Request for Proposal. They may choose to enhance these conditions. Enhancements will be considered in the overall evaluation, but the I-Team may reject exceptions that do not conform to state bid laws and/or create inequality in the treatment of the bidders.

K. Bid Contract Execution

Both the non-collusion statement that is enclosed with the Request for Proposals and the contract form delivered to the successful firm for signature must be executed by a representative who has legal capacity to enter the bidder into a formal contract with the State of Delaware, Department of Natural Resources and Environmental Control.

IV. PROJECT GUIDELINES

A. Scope of Work

The successful respondent will deliver a plan to collect elevation data for the whole of the State of Delaware, over time. The plan will provide for collection of data for portions of the state, as identified and prioritized by the I-Team, in consultation with the Elevation Working Group, as funding for those portions becomes available.

The Working Group feels that it will most likely want to collect data for areas of about the size of the Inland Bays watershed in Eastern Sussex County, and will likely, though not certainly, try to complete the project in the following order: Eastern Sussex County, Western Sussex County, the Christina Watershed, the Red Clay Watershed, the White Clay Watershed (in New Castle County), Southern New Castle County, and Kent County.

The project will begin with a pilot area, likely the Inland Bays Watershed, for which grant funding has been identified.

The successful respondent will be able to deliver LIDAR data, filled and unfilled Digital Elevation Models (DEMs) and contour lines (both true and cartographic) in digital form.

LIDAR-derived data shall have the accuracy required to produce topographic maps and products that meet the National Standard for Spatial Data Accuracy (NSSDA). DEM posting shall be the minimum allowed by the data and shall not exceed 5 meters. Accuracy shall be 1.2 feet (equivalent to 2-foot contours). The successful respondent will include plans for independent quality assurance and quality control sufficient to FEMA flood mapping standards.

The digital files shall be in ESRI Shapefile format. The product shall include an index and referencing system, if appropriate.

The data shall be collected in such a way that the clearest possible picture of ground conditions is shown. It is preferred the project be tied to tidal stages.

The project shall result in digital data files that are capable of being made fully and freely available to state agencies and to county and local governments and their subcontractors. The data shall also be available without restriction to the USDA Natural Resources Conservation Service (NRCS) and to the United State Geological Survey (USGS) or other federal agencies, at the discretion of the Delaware I-Team, for use in federal-state cooperative agreements and other similar arrangements. Proposals should contain estimates of the costs of duplication of the data set for distribution among state agencies and others.

The product shall be geo-referenced within the Delaware State Plane Coordinate System (NAD83(91) Horizontal Datum and NAVD88 Vertical Datum, in meters), as outlined in Title 6, Chapter 55, §5502(b), of the Delaware State Code.

All products shall include full, FGDC-compliant metadata files.

B. Skills Required

The successful respondent shall demonstrate the ability to plan and carry out a successful LIDAR program, including the ability to plan for and include GPS base station(s) to ensure reliable differential processing of airborne GPS data. And including the ability to plan and manage a project in which data acquisition is planned on a statewide basis but collected on a regional basis.

The successful respondent shall demonstrate the ability to work within the guidelines specified in FEMA's Flood Hazard Mapping Program: Guidelines and Specifications for Flood Hazard Mapping Partners including the standards as defined by Appendix A: Guidance for Aerial Mapping Surveys (Final Version, February 2002).

The successful respondent shall demonstrate the ability to create the needed Digital Elevation Models and contour lines.

The successful respondent shall demonstrate the knowledge and the ability to transmit large quantities of data to the state in a usable form.

C. Project Goals

The project will yield a LIDAR product of sufficient scale and resolution to help meet the State's need to provide useful, accurate and timely data resources to assist in and improve planning efforts at all levels of government.

D. Use and Distribution Rights

All deliverable data and documentation shall be free from restrictions regarding use and distribution. Data and documentation provided under this project shall be freely distributable by the Delaware Spatial Data Implementation Team. It is anticipated that this data will be made available via the Delaware Data Mapping and Integration laboratory (DataMIL) at *datamil.udel.edu*.

E. Tasks and Responsibilities

Final tasks and responsibilities shall be determined by the Delaware I-Team based on cost and availability of funding.

The successful bidder shall be prepared to plan a statewide data acquisition program to be carried out in regional "project" segments as funding is available. The successful bidder shall also be prepared to do the following for each regional project of the plan (as detailed in the FEMA's Flood Hazard Mapping Program: Guidelines and Specifications for Flood Hazard Mapping Partners, Appendix A: Guidance for Aerial Mapping Surveys (Final Version, February 2002)).

1. Pre-Project Deliverables
 - a. A map showing the project study area
 - b. Documentation of flight details
 - c. A chart of areas of high position dilution of precision (PDOP)
2. Post Project Deliverables
 - a. A LIDAR system data report
 - b. A flight report
 - c. A ground control report
 - d. Data processing procedures for selection of postings, and all orthometric values of x, y, and z coordinates for LIDAR returns
 - e. A system calibration report discussing all listed topics
3. Delivery of Digital Data
 - a. All raw datasets including survey points filling voids and dataset of transects (if generated), bare-earth DEM data, and breaklines in separate data files
 - b. Uniform DEM(s) on CD-ROM
 - c. Spatial data files of contour lines derived from DEMs

The successful bidder shall also be prepared to provide complete project management for the over-all statewide plan. The successful bidder shall also be prepared to research available Ground Control Points (GCP), as maintained by Delaware public agencies, and to provide any new GCPs as needed.

V. SPECIFIC PROPOSAL REQUIREMENTS

Bidders are free to use any format that may enhance the bidder's presentation. The Delaware I-Tam will expect full detail, but will also appreciate brevity, provided that each response must address the following:

1. Describe your general and specific experience that is relevant to this project.
2. Describe any specific experience in Delaware.
3. Provide professional qualification information for all the persons who will work on the project.
4. Give an outline of how you would accomplish the project, including a proposed time schedule.

5. Identify and explain any relationships with any of the major stakeholders on this issue in Delaware. Include a statement to the effect that any such representation or relationship will not affect your ability to be objective and independent in your report and recommendations to the Delaware I-Team.
6. Demonstrate competence in LIDAR acquisition and management.
7. Identify three references.

VI. BASIS OF CONTRACT AWARD

A. Proposals

Proposals must respond to every requirement specified in Item V in order to be considered responsive. Firms submitting proposals may be afforded an opportunity for discussion and revision of proposals. Revisions may be permitted at the discretion of the I-Team after submission of proposals and before award of contract for the purpose of obtaining the best and final offers. Negotiation may be conducted with responsible firms or individuals whose proposals are found to be reasonably likely to be selected for award. The contents of any proposal shall not be disclosed and will not be available to competing firms during the negotiation process.

B. Review

Proposals will be reviewed regarding compliance with the RFP as a whole. Vendors will be eliminated for non-compliance. Remaining proposals will be evaluated using the following criteria:

1. Quality of proposed solution (40%)
 - a. Extent to which the proposal meets the requirements as defined in the RFP.
 - b. Extent to which the proposal meets the needs of the Delaware GIS community, as determined by the bid review committee.
2. Capacity to perform services and meet the requirements of the project (20%)
 - a. Quality and thoroughness of the vendor's submitted work plan.
 - b. Demonstrated understanding of the needs and requirements of project.
 - c. Demonstrated competencies as outlined in the RFP.
 - d. Ability of the vendor to complete the project.
3. Total cost of the proposal. (20%)
 - a. Ability of the State to meet as many objectives as possible, given funding constraints.
4. Record of performance (10%)
 - a. Experience and reputation of the vendor.
 - b. Past experience of references.
 - c. Financial stability of the vendor.
5. Expertise (10%)
 - a. Previous experience with system installations in local government.
 - b. Expertise of proposed project staff

The I-Team shall award this contract to the most responsible and responsive offeror who best meets the terms and conditions of the proposal. The award will be made on basis of quality, capacity, price, performance record, and capacity.

The I-Team reserves the right to reject any or all proposals in whole or in part, to make multiple awards, partial awards, award by types, item by item, or lump sum total,

whichever may be most advantageous to the State of Delaware. The intent though is to award this contract to one (1) offeror.

Please submit five (5) copies of detailed proposals, including detailed, itemized cost estimates, to Delaware Coastal Programs, at the address below, by **4:30 p.m. EST, on Monday, February 18, 2003 (Note: Clarified on 2/5/03 to account for State Holiday on 2/17/03).**

Delaware Office of State Planning Coordination
Third Floor, Suite 7
Thomas Collins Building
540 S. DuPont Hwy.
Dover, Delaware 19901

The proposals must be in a sealed envelope with your name and the words "Proposal: Delaware Statewide LIDAR Project."

Please review and follow the information and instructions contained in the special provisions section of the RFP. Should you require additional information, please contact Mike Mahaffie, Delaware Office of State Planning Coordination, at (302) 739-3090.

DATE: _____

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date to the Delaware Spatial Data Framework I-Team.

It is agreed by the undersigned bidder that the signed delivery of this bid represents the bidder's acceptance of the terms and conditions of this invitation to bid including all specifications and special provisions.

NOTE: Signature of the authorized representative **MUST** be of an individual who legally may enter his/her organization into a formal contract with the Delaware Spatial Data Framework I-Team.

NAME OF BIDDER: _____

NAME OF AUTHORIZED REPRESENTATIVE

(Please type or print) _____

SIGNATURE _____

TITLE _____

ADDRESS OF BIDDER _____

PHONE NUMBER _____

PURCHASE ORDERS SHOULD BE SENT TO:

COMPANY NAME _____

ADDRESS _____

CONTACT _____

PHONE NUMBER _____

FEDERAL E.I. NUMBER _____

STATE OF DELAWARE BUSINESS LICENSE NUMBER _____

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED

_____ SWORN TO AND SUBSCRIBED BEFORE ME this _____ day of _____, 2003.

Notary Public

City of _____

County of _____

State of _____

My commission expires _____.