CONSULTING AND TECHNICAL SERVICES II (CATS II)

TASK ORDER REQUEST FOR PROPOSALS (TORFP)

DIGITAL HIGH-RESOLUTION AERIAL PHOTOGRAPHY (ORTHOPHOTOGRAPHY) FOR MARYLAND WEST OF THE CHESAPEAKE BAY

CATS II TORFP # 060B1400054

MARYLAND DEPARTMENT OF INFORMATION TECHNOLOGY

ISSUE DATE: DECEMBER 16, 2010

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KEY INFORMATION SUMMARY SHEET

This Consulting and Technical Services II (CATS II) Task Order Request for Proposals (TORFP) is issued to obtain the services necessary to satisfy the requirements defined in Section 2 - Scope of Work. All CATS II Master Contractors approved to perform work in the functional area under which this TORFP is released are invited to submit a Task Order (TO) Proposal to this TORFP. Master Contractors choosing not to submit a proposal must submit a Master Contractor Feedback form. The form is accessible via, your CATS II Master Contractor login screen and clicking on TORFP Feedback Response Form from the menu. In addition to the requirements of this TORFP, the Master Contractors are subject to all terms and conditions contained in the CATS II RFP issued by the Maryland Department of Information Technology and subsequent Master Contract Project Number 060B9800035, including any amendments.

TORFP Title:	Digital High-Resolution Aerial Photography for Maryland
Functional Area:	Functional Area 4 - Geographical Information Systems
TORFP Issue Date:	December 16, 2010
Closing Date and Time:	January 7, 2011 @ 4:00 PM, local time
TORFP Issuing Agency:	Maryland Department of Information Technology
Send Questions and Proposals to:	Donna DiCerbo Donna.DiCerbo@doit.state.md.us
TO Procurement Officer:	Donna DiCerbo Office Phone Number: 410-767-6056 Office FAX Number: 410-333-5164
TO Manager:	Kenneth M. (Kenny) Miller Office Phone Number: 410-260-4044 Office FAX Number: 410-974-5615
TO Project Number:	(060B1400054)
TO Type:	Fixed price
Period of Performance:	Eighteen (18) months
MBE Goal:	Fifteen Percent (15%)
Small Business Reserve (SBR):	No
Primary Place of Performance:	Contractor/vendor site
TO Pre-proposal Conference:	None

SECTION 1 - ADMINISTRATIVE INFORMATION

1.1 RESPONSIBILITY FOR TORFP AND TO AGREEMENT

The TO Procurement Officer has the primary responsibility for the management of the TORFP process, for the resolution of TO Agreement (TOA) scope issues, and for authorizing any changes to the TOA.

The TO Manager has the primary responsibility for the management of the work performed under the TOA; administration functions, including issuing written directions; ensuring compliance with the terms and conditions of the CATS II Master Contract; and, in conjunction with the selected Master Contractor, achieving on budget/on time/on target (e.g., within scope) completion of the Scope of Work.

1.2 TO AGREEMENT

Based upon an evaluation of TO Proposal responses, a Master Contractor will be selected to conduct the work defined in Section 2 - Scope of Work. A specific TOA, Attachment 3, will then be entered into between the State and the selected Master Contractor, which will bind the selected Master Contractor (TO Contractor) to the contents of its TO Proposal, including the price proposal.

1.3 TO PROPOSAL SUBMISSIONS

The TO Procurement Officer will not accept submissions after the date and exact time stated in the Key Information Summary Sheet above. The date and time of submission is determined by the date and time of arrival in the TO Procurement Officer's e-mail box. The TO Proposal is to be submitted via e-mail as two attachments (technical and financial) in MS Word format and in PDF format. The "subject" line in the e-mail submission shall state the TORFP #060B1400054. The first file(s) will be the TO Proposal technical response to this TORFP and titled, "CATS II TORFP #060B1400054 Technical". The second file(s) will be the financial response to this CATS II TORFP and titled, "CATS II TORFP 060B1400054 Financial". The following proposal documents must be submitted with required signatures as .PDF files with signatures clearly visible:

- Attachment 1 – Price Proposal
- Attachment 2 - MBE Forms D-1 and D-2
- Attachment 4 - Conflict of Interest and Disclosure Affidavit
- Attachment 13 – Living Wage Affidavit of Agreement

1.4 ORAL PRESENTATIONS/INTERVIEWS

Master Contractors and proposed staff may be required to make an oral presentation to State representatives. Significant representations made by a Master Contractor during the oral presentation shall be submitted in writing. All such representations will become part of the Master Contractor's proposal and are binding, if the Contract is awarded. The Procurement Officer will notify Master Contractor of the time and place of oral presentations (if required).

1.5 MINORITY BUSINESS ENTERPRISE (MBE)

A Master Contractor that responds to this TORFP shall complete, sign, and submit all required MBE documentation (Attachment 2 - Forms D-1 and D-2) at the time it submits it's TO Proposal. **Failure of the Master Contractor to complete, sign, and submit all required MBE documentation at the time it submits the TO Proposal will result in the State's rejection of the Master Contractor's TO Proposal.**

1.6 CONFLICT OF INTEREST

The TO Contractor awarded the TO Agreement shall provide IT technical and/or consulting services for State agencies or component programs with those agencies, and must do so impartially and without any conflicts of interest. Each Master Contractor shall complete and include a Conflict of Interest Affidavit in the form included as Attachment 4 this TORFP with its TO Proposal. If the TO Procurement Officer makes a determination that facts or circumstances exist that give rise to or could in the future give rise to a conflict of interest within the meaning of COMAR 21.05.08.08A, the TO Procurement Officer may reject a Master Contractor's TO Proposal under COMAR 21.06.02.03B.

Master Contractors should be aware that the State Ethics Law, State Government Article, §15-508, might limit the selected Master Contractor's ability to participate in future related procurements, depending upon specific circumstances.

1.7 NON-DISCLOSURE AGREEMENT

Certain system documentation may be available for potential Offerors to review at a reading room at Maryland Department of Information Technology. Offerors who review such documentation will be required to sign a Non-Disclosure Agreement (Offeror) in the form of Attachment 10. Please contact the TO Procurement Officer of this TORFP to schedule an appointment.

In addition, certain documentation may be required by the TO Contractor awarded the TOA in order to fulfill the requirements of the TOA. The TO Contractor, employees and agents who review such documents will be required to sign, including but not limited to, a Non-Disclosure Agreement (TO Contractor) in the form of Attachment 11.

1.8 LIMITATION OF LIABILITY CEILING

Pursuant to Section 27 (C) of the CATS II Master Contract, the limitation of liability per claim under this TORFP shall not exceed the total TOA amount.

1.9 CONTRACT MANAGEMENT OVERSIGHT ACTIVITIES

DoIT is responsible for contract management oversight on the CATS II master contract. As part of that oversight, DoIT has implemented a process for self-reporting contract management activities of CATS II task orders (TO). This process shall typically apply to active TOs for operations and maintenance services valued at $1 million or greater, but all CATS II TOs are subject to review.

Attachment 12 is a sample of the TO Contractor Self-Reporting Checklist. DoIT will send initial checklists out to applicable TO Contractors approximately three months after the award date for a TO. The TO Contractor shall complete and return the checklist as instructed on the checklist. Subsequently, at six month intervals from the due date on the initial checklist, the TO Contractor shall update and resend the checklist to DoIT.

SECTION 2 - SCOPE OF WORK

2.1 PURPOSE

Maryland Department of Information Technology, Geographic Information Officer is issuing this CATS II TORFP to obtain digital, high-resolution aerial imagery for Maryland suitable for use in Computer Aided Dispatch (CAD) systems located in Emergency 911 centers and in Geographic Information Systems (GIS). The imagery will be ortho-rectified and made map accurate according to American Society of Photogrammetry and Remote Sensing (ASPRS) map accuracy standards. Two additional tasks will be performed: 1) independent project management of the imagery project from pre-planning, data collection, processing, quality assurance testing to delivery and 2) independent quality assurance testing of the product as submitted to the TO Manager. All three functions will be handled within this TORFP.

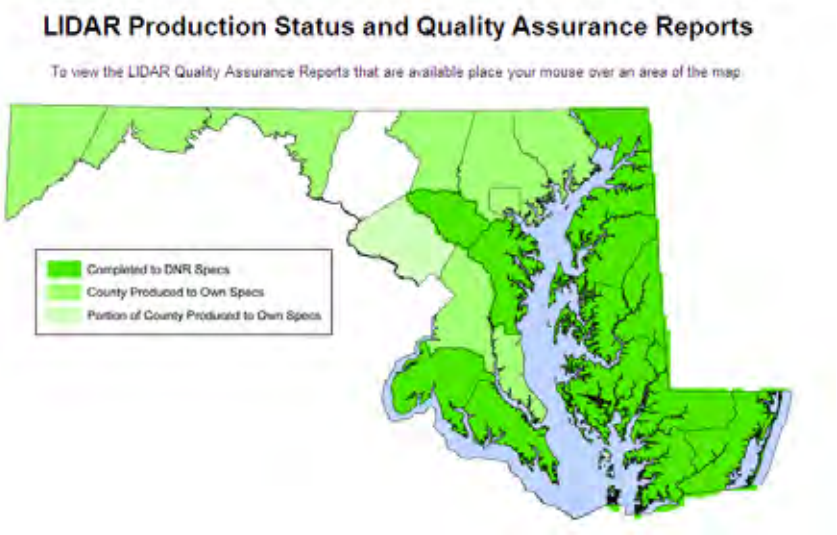
Maryland state agencies have been partnering and procuring aerial photography and related photogrammetric services for nearly two decades that has resulted in numerous efforts to collect data across the state. In 2007, the Maryland State Highway Administration, on behalf of Maryland's State Imagery Acquisition Partnership, contracted to acquire and produce digital orthophotography for the entire State. Imagery was collected during the 2007 and 2008 flying seasons. In 2010 a firm was also contracted to collect orthophotography for the eastern shore of Maryland. The primary intent for the 2011 project is to collect new aerial photography and to develop new statewide digital orthophotography for the remaining 14 counties and Baltimore City not captured previously in 2010.

The State of Maryland intends to complete future statewide orthophotography programs on a regular (2-3) year cycle. This procurement includes an option for the State to extend the contract to include one additional update cycle for imagery of the entire State (including the Eastern Shore counties). The State or individual counties may also contract for various buy-up options, described below as part of this procurement.

Over the past 10 years the Maryland Department of Natural Resources, in partnership with several MSGIC (Maryland State Geographic Information Council) members, collected LiDAR-derived elevation data for most of the State. Other Counties have also contracted separately for LiDAR data. Recently the National Geospatial Agency (NGA) contracted and provided to DNR LiDAR data for 95% of Prince George's and Montgomery Counties. With the exception of Frederick County (where a contour DTM is available), Maryland LiDAR data is available Statewide. These LiDAR data products were collected in phases and not collected with a consistent set of statewide specifications. The data were not tied to a common geodetic reference system. The existing LiDAR and elevation data will be provided "as is". Overall the condition and quality is considered good however it will be the responsibility of the contractor to verify that it is adequate for orthorectification to the accuracy standards specified and to complete any necessary enhancements.

The vendor shall provide updated digital elevation data, either through traditional updating processes or through a statewide/regional LiDAR collection as needed to support orthorectification to the specified standards. Offerors may propose to collect new LiDAR data as part of the orthophoto production effort, or may propose to collect LiDAR as an optional value-added service. See the figure below or go to the following site for additional information.

http://dnrweb.dnr.state.md.us/gis/data/lidar/LIDARStatus.html



2.1.1 Overview of Requested Services

There are two (2) primary intents for the 2011 project. They are:

1. Provide a new statewide digital orthophoto base map accurate to the American Society of Photogrammetry and Remote Sensing ASPRS Class I Standards for 1"=200' with a 0.5' ground pixel resolution. The product shall be 4-band (R, G, B, NIR) and delivered in accordance with the requirements outlined herein.
2. Provide an updated elevation data set that supports the development of the statewide digital orthophoto base map. Two options are being sought for the elevation component of this project:
    a. Utilize the existing Maryland DNR and County based LiDAR (or County photogrammetric DTM when LiDAR is not available) for the purpose of developing the statewide digital orthophoto dataset and providing photogrammetric updates to the DEM where necessary to support orthorectification to the specified accuracy standards. If the existing surface is to be used and updated, any updates shall be provided as a deliverable.
    b. Provide a new elevation dataset derived through LiDAR data collection and processing. This product would be required to be compliant with the accuracies outlined in FEMA's Appendix A, "Guidance for Aerial Mapping and Surveying" for 2-foot equivalent contour interval accuracy (RMSEz = 18.5-cm). Ideally this would be done for the entire 2011 area to be contracted. Potentially the LiDAR could be done for selected counties, or for areas on the eastern shore that are not included as part of the 2011 image acquisition. Final decisions on the amount and extent of LiDAR acquisition will be made by the State after receipt of proposals.

The overall goals, deliverables and requested options for these two primary items are outlined within this RFP document. The respondent shall propose the recommended solution. Alternative or optional solutions, in addition to the recommended solution are encouraged. Any alternative solutions should include a technical and price proposal to support the alternative review process.

The United State Geological Survey (USGS) will be participating as a partner in this program and will be contributing funding to support their NIMA 133 Urban Areas for Domestic Preparedness Program. Their support will encompass the Baltimore and Washington, DC Urban Areas.

In addition, the state has offered local partners the following primary buy-up options:

1. Improve the resolution of the final digital orthophotography. This buy-up option would change the map scale from 1"=200' to 1"=100' and would change the pixel resolution from 0.5' to 0.25'.
2. Provide adjustments in the aerial photography mission and resultant orthophoto production processes to build a near true ortho product over locally designated areas. This will require an adjustment in both forward overlap and sidelap and may also require "spot shots" to be captured over specified structures (buildings and bridges). This would be done for areas no less than 1 square miles in size.

2.1.2 Project Area

The project encompasses the region west of the Chesapeake Bay and covers approximately 6,449 square miles of land area (see table of land area by county below). The actual project area to be captured will be larger to take into account water and buffer areas. A buffer of 1000 feet shall be provided. Note that the Maryland border extends to the Virginia shoreline of the Potomac River. The buffer shall therefore extend 1000' beyond the Virginia shoreline. The border along the Chesapeake Bay shall be buffered beyond the shoreline a minimum distance of 2,500 feet. Full tiles beyond the defined project area as defined by the State are not required for orthophotography or elevation data. White pixels shall be provided to fill out tiles. The overlap distances are required to ensure sufficient imagery and elevation data exists so as to complete the entire project boundary without any concerns of quality or accuracy fall-off at the boundary. Note that inland waterways (Patapsco River, Severn River, Patuxent River, Back River, South River, and other inland waterways) shall be covered in their entirety. Also note that the entire span of the Chesapeake Bay Bridge (US 50), Susquehanna (I-95), Potomac River Bridge (US 301), Francis Scott Key (695) Bridge and the new Woodrow Wilson Bridge (I-495) shall be captured. The contractor shall ensure that full coverage for both shorelines for the Potomac and Susquehanna Rivers is obtained.

Full coverage shall also be for Pooles Island Harford County), Hart-Miller Pleasure Island State Park (Prince George's County; and Gibson Island (Anne Arundel County). As an optional cost the State is also interested in obtaining orthophotography for James, Hooper, and Barren Islands in Dorchester. It is understood that control for these island mapping efforts may rely exclusively on the airborne GPS and IMU data.

As an optional cost the State is also interested in obtaining a cost estimate for full coverage to the political boundary for each of the Counties to be flown. This would include significant "water only" tiles in the Chesapeake Bay. This full coverage area beyond the required areas described above could be flown at a higher altitude (up to 20,000' AMT) to provide continuity of imagery.

Land Area by County

County	Sq. Miles (land area)	Pop.
Allegany	425.4	72,238
Anne Arundel	415.9	512,790
Baltimore City	80.0	631,366
Baltimore	598.6	785,618
Calvert	215.2	88,698
Carroll	449.1	169,353
Charles	461.0	140,764
Frederick	662.9	225,721
Garrett	648.0	29,698
Harford	440.4	240,351
Howard	252.0	274,995
Montgomery	495.5	950,680
Prince George's	485.4	820,852
St. Mary's	361.3	101,578
Washington	458.1	145,384
TOTAL	6,449	5,190,086

2.1.3 Scope of Work Overview

The Scope of Work ("Work") for this project will include the following services:

- Multi-spectral Aerial Photography Acquisition using either a linear or area array CCD-based digital sensor
- Image Processing for both Color and Near IR Raw TIFF Images (12-bits per channel or better)
- Aerial Triangulation
- If required to support the digital orthophoto production, spot updates of the State- provided existing Digital Elevation Model. *(Note: updates must be able to support orthorectification and are not required to support contour modeling or other DTM applications within the State).*
- Optionally produce a new statewide Digital Elevation Model using LiDAR, with nominal post spacing of 1.4 meters that meets, at a minimum, FEMA's requirements for elevation data with vertical accuracy equivalent to 2-foot contours. Breakline feature extraction using LiDARgrammetry is not required but may be contracted as a secondary buy up option to ensure the final surface is hydrologically enforced.
- Production of 1"=200' Digital Orthophotography in both Color and Near IR at a 0.5' Ground Pixel Resolution that meets or exceeds the ASPRS Class I at 1"=200'.
- Quality Assurance and Quality Control of all deliverable products
- FGDC Metadata
- Project Management including:
    - Preflight Initiation Meeting
    - Pilot Review Meeting
    - Production Meetings (as needed)
    - Weekly Progress Reporting (both textual and graphical)
    - Weekly Coordination Teleconferences

The specifics for each work area plus the required deliverables are outlined in below if this document.

2.2 REQUESTING AGENCY BACKGROUND

The Maryland Department of Information Technology, Geographic Information Officer (TO Manager) is sponsoring this TORFP on behalf of the federal, state, local governments who use these digital data for many purposes, especially for use in Computer Aided Dispatch (CAD) systems located in Emergency 911 centers. These data will be available to the public for use in many applications. Optionally, LiDAR to develop digital orthophotography and supporting digital elevation data may be collected. The TO Manager will be relying on federal, state and local government agencies to assist in TORFP, project oversight and inspection of deliverables.

2.3 ROLES AND RESPONSIBILITIES

Define personnel roles and responsibilities under the TO.

- TO Manager – State Geographic Information Officer (GIO) will be responsible for project oversight at the state level.
- TO Contractor – will be required to meet fully the terms, conditions and requirements of the TO.
- TO Procurement Officer – assigned at DoIT to supervise this procurement.
- TORFP Review Committee – this group is comprised of five (5) representatives from the state and local government sectors and will review the TORFP prior to issuance to ensure consistency with functional requirements, deliverable requirements and acceptance standards. The names of these members are confidential and will not be made public prior to any award. This committee will evaluate the Technical and Financial scores of the TORFP's and make a final determination.

2.4 REQUIREMENTS

There are three functional areas that this TORFP is requesting related to collecting, processing and delivering aerial imagery:

- Project Management – This function will manage and track progress of planning for the data collection, monitoring the quality controls and production processes used by the imagery vendor associated with data collection, processing and delivery of imagery. This also includes managing the Quality Assurance Inspection and Testing process.
- Aerial Imagery Collection, Processing and Delivery - This function will encompass the process of planning for the image collection, processing of the imagery according to the specification contained within this TORFP and delivery of the final product to the TO Manager. and
- Quality Assurance Inspection and Testing – This function will test the final product(s) according to the TORFP specifications and may include data from interim products or stages.

All three will be covered by this TORFP.

2.4.1 Project Management

The TO Contractor shall assign an experienced project manager to the project. The project manager shall work with the State's TO Manager to ensure the successful implementation and completion of the project. The TO Contractor shall follow the Project Management Institute (PMI) methodology for managing projects. A certified PMP is preferred (not required) as the project manager. If a certified PMP is proposed, a copy of their certificate shall be provided with the proposal response. The State's expectations for project management include:

- Assignment of experienced project manager (relative to the defined task)
- Attendance at required project meetings

- Weekly status reports and communication
- Managing and updating of project schedule (Microsoft Project)
- Validation of project deliverables for completeness, accuracy and timeliness
- Proactive identification of any issues effecting schedule, delays and/or quality
- Responsive to client emails and phone calls within 1 business day
- Project management experience of at least three years
- Successful project management experience on projects of similar scope (orthophotography, LiDAR, etc) and size (in square miles)
- Experience working with multiple prime and sub-contractors on similar projects.

The project manager shall ensure that all task orders are completed on-time, within budget and that a quality product is delivered as defined in the quality assurance section of this RFP (Section 2.13). Changes of project manager resource after selection must be approved by the State.

2.4.2 Aerial Imagery Collection, Processing and Delivery

2.4.2.1 Project Coordinate System

All existing data and any new data produced shall be on the Maryland State Plane Coordinate System in the NAD83 Datum using the latest (2007) High Accuracy Reference Network (HARN) Adjustment. Two deliverables for each product procured will be required. The first will have units as US Survey Feet and the second will have units as Meters. The Vertical Datum will be NAVD88. The ellipsoid shall be GRS80. The meters based delivery will be provided after the US Survey Feet deliveries have been made and quality assurance checks have been completed. The meters based deliveries will use the same grid system and will involve a conversion of 0.5'=.1524 meters.

2.4.2.2 Accuracy Standards

All products produced for this project shall meet or exceed the NMAS (National Map Accuracy Standards) for 1"=200' maps. The table below interprets that requirement in terms of RMSE (Root Mean Square Error), CE90 (Circular Error at the 90% Confidence Level), $RMSE_r$ (Square Root of $RMSE_x$ + $RMSE_y$) and Accuracy (horizontal radial accuracy at 95% Confidence Level).

Map Scale	$RMSE_{xy}$	CE90	$RMSE_r$	$Accuracy_r$
1"=200'	2.000'	4.292'	2.828'	4.895'

The Offeror's QA/QC team will perform a complete quantitative analysis of the data and will report the final $RMSE_r$ and Accuracy errors. An independent evaluation of the results may also be performed by the State.

2.4.2.3 Buy-Up Accuracy Standards

A local jurisdiction that has elected to "buy-up" to an improved accuracy will require an improved level of accuracy to be obtained for its localized adjustment.

Map Scale	$RMSE_{xy}$	CE90	$RMSE_r$	$Accuracy_r$
1"=100'	1.000'	2.146'	1.414'	2.448'

The state's QA/QC team may independently perform a complete quantitative analysis of the data and will report the final $RMSE_r$ and Accuracy.

2.4.2.4 Ground Control

Offerors shall propose their approach for controlling the orthophotography including how, if applicable, existing control will be included. Each offerer should outline the # of control points required and should show on the flight plan map, the preliminary locations of the required control points. A minimum of 10 control points per county is required. If 10 points exceed the requirements for achieving the required accuracy of the orthophotography, the additional points should be used for validation purposes. The offeror shall be responsible for establishing ground control of sufficient density and accuracy to meet accuracy requirements of the deliverable orthophotography at the resolutions required.

Offerors shall not assume that existing control will fully meet necessary project requirements. Counties will provide information as it is available on existing control. NGS control is documented on their website. SHA will provide information on its existing control (see map below).

Offerors shall determine the availability and/or quality of any existing ground control and supplement the existing control with new control where needed. Offerors will also be responsible for any transformations, normalizations and/or tying local geodetic networks to fit the coordinate system, datum and overall project requirements for this initiative.

Any new ground control established for this project must be tied to the Maryland HARN and must be established by a licensed surveyor in the State of Maryland. All ground control points must be documented as such so that they are easily relocated by other surveyors throughout the duration of the project.

All aerial photography must be flown with both Airborne GPS and an IMU (Inertial Measurement Unit). The final ABGPS/IMU solution will be delivered to the State for review and certification before the aerial triangulation process can begin.

2.4.2.5 Optional Buy-Up Geodetic Network Adjustment

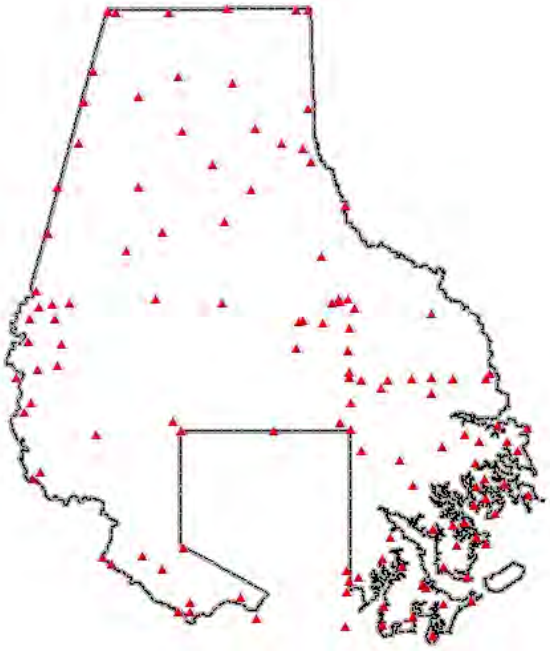
Many local jurisdictions have established ground control for previous aerial missions. The State has offered local jurisdictions the opportunity to potentially improve the accuracy of the resultant products by providing its local geodetic network to the offeror to use as additional inputs into the aerial triangulation process.

For this option each jurisdiction (at their cost) will be responsible for providing its geodetic network in a format consistent with what is required to meet the datum, accuracy and overall requirements for this project. It is expected that many of these points are not photo-identifiable and thus, will require a target to be established prior to the aerial mission. It is imperative that the offeror outline in its proposal any restrictions, limitations and guidelines required for targeting and using these additional survey control points.

2.4.2.6 Sample County for Optional Buy up Option

Sample County independently maintains approximately 125 control points that will be made available to the successful respondent.

The map below illustrates the distribution of control points around Sample County.



2.5 Aerial Photography

This section outlines the requirements for the aerial photographic mission.

2.5.1 Aerial Camera

The offeror is required to use a large format area or linear array based digital sensor designed specifically for large-scale photogrammetric mapping. Digital sensors proposed for use shall be recognized by the U.S. Geological Survey (USGS) as capable of providing quality, consistent image data to support civil government mapping and orthophotography product development (http://calval.cr.usgs.gov/manufacturers_certification.php). Camera calibration reports for the specific sensors proposed for this project shall be provided as a digital file(s) with each respondent's proposal.

The camera must capture simultaneous multi-spectral (RGB and NIR) information. The camera shall be equipped with and utilize either electronic or true Forward Motion Compensation. It must also be properly installed on a Gyro-Stabilized Mount.

The digital aerial images shall be clear and sharp in detail and of high radiometric quality. The camera shall capture the images in an uncompressed "lossless" image format. The camera shall, at minimum, utilize a 12-bit per pixel radiometric resolution. The images shall also be free from image blurs, image artifacts, "cold" or "hot" pixels, color distortion, color balance or tonal problems, or any other type of digital blemish.

The entire mission, plus all buy-ups shall be flown with the same type (frame versus linear array) of digital cameras using the same flight parameters (with the exception of flying height adjustments for improved resolution or true orthophoto areas).

If multiple sensor platforms are proposed it must be specifically detailed and advantages associated with a multi-sensor approach should be described. For those cameras that now have multiple versions in the marketplace, it is required that compatible sensors be utilized for the entire mission to ensure that all interim and final products are the same and meet the requirements outlined herewith in. If an offeror proposes multiple generations of the same sensor, the offeror shall clearly address compatibility issues and how those will be overcome in their technical production processes.

2.5.2 Flight Specifications

The flying height for this project should be chosen in accordance with the camera manufacturer's recommended flying height to produce digital orthophotography to the accuracy standards noted previously. Offeror's proposal must contain a flight plan map with the chosen altitude for flight clearly labeled. The flight plan map should also, at a minimum, include the # of flight lines, # of exposures and # of flight line miles.

Offeror shall clearly state its compliance with these items. The following additional specifications are non-negotiable:

2.5.2.1 Re-Flights

Offeror must correct at no additional fee, aerial imagery that does not meet defined specifications. All re-flights must be centered on the plotted flight lines and must be taken with the same camera system. If for any reason the offeror fails to acquire the entire area, re-flights are required to complete full counties. Partial county deliverables split between multiple acquisition seasons is not acceptable.

2.5.2.2 Forward Overlap

The forward overlap applied should be 60% (+/- 3% allowance for deviation). In the case of linear array scanners, this requirement does not exist. In those areas designated for Near True Orthos, the offeror must increase the forward overlap from 60% to 80%.

2.5.2.3 Sidelap

30% sidelap should be applied except in those areas designated for Near True Orthos. In those areas, the offeror must increase the sidelap from 30% to 60%.

2.5.2.4 Environmental Conditions

Aerial imagery should be obtained when the sky is clear (cloud cover will not be tolerated); the ground is free from snow, haze, smoke, dust, and cloud shadows; and deciduous trees are sufficiently barren to permit the intended uses of the imagery. Spectral reflectance from water should be minimized and should not obscure shoreline features. The solar angle must be 30-degrees or more above the horizon at the time of

exposure. Urban area flights over Baltimore City should be at a 40-degree sun angle. Allowance for 25-degree sun angles may be provided under certain conditions and is subject to State approval prior to any flight.

2.5.2.5 Crab

Crab must not exceed five-degrees between any two consecutive flights, nor more than three degrees on any one flight line. At the earliest opportunity, new imagery must be acquired to replace rejected photographs or flight lines.

2.5.2.6 Bridges and Overpasses

Bridges must be free of distortion and must be corrected to their true position in the final digital orthophoto products. To accommodate this, each offeror can prescribe their own methodology that could include spot shots, breaklines on bridges, photo correction using photo enhancement software or some combination therein.

2.5.3 Flight Restrictions

Offerors should be aware of potential flight restrictions in and around Maryland. For past projects, the areas that had the greatest restrictions included the following:

- Washington D.C. / lower Montgomery County Airspace
- Aberdeen Proving Grounds Harford County
- Camp David and Fort Detrick in Frederick County
- BWI Airport
- Patuxent Naval Air Station

A detailed list of all restricted areas in and around the project area will be identified and discussed with the selected offeror at the Pre-flight initiation meeting. The State will work diligently to provide the necessary demarcations and Point of Contact (POC) information to the offeror to ensure restrictions are minimized. In addition, federal contacts at the National Geospatial Agency (NGA) are willing to help with contacting base commanders regarding the DoD support for this project. In the proposal, each offeror must address the information and support that will be needed to obtain the appropriate flight clearances. Access to these areas will ultimately be the responsibility of the successful offeror.

2.5.4 Optional Near True Ortho and/or Increased Accuracy/Resolution Buy-Ups

Some local jurisdictions have business requirements that necessitate the acquisition of near true ortho imagery in specifically identified portions of their locality. Several counties are also considering countywide acquisition of near true orthos to support in-house updates of planimetric features (specifically buildings and roads). For each of these project options, it will be required to adjust the forward overlap from 60% to 80% (not applicable for linear array based digital sensors) and to adjust the sidelap from 30% to 60%. However, each agency may elect for additional “spot shots” or mini-strips to be taken over buildings that have traditionally yielded less than desirable results using the adjusted forward overlap and sidelap approach. Alternative methods of producing near true orthos (such as building modeling) will also be considered.

Several areas will also require increased resolution/accuracy. Currently improved accuracy/resolution buy-ups (100’/0.25’ GSD) are planned for:

- BWI Airport
- Martin State Airport
- Seagirt/Dundalk Marine Terminals
- North Locust Point/South Locust Point/Masonviolle/Fairfield Marine Terminals
- Sparrows Point

- Cox Creek
- Curtis Bay

Other areas may be added to this list depending upon the cost.

2.5.5 Aircraft Commitments

The state requires that this project be executed with a multiple sensors dedicated to aerial photography acquisition. Each offeror should clearly state their plan for acquisition to ensure the following objectives are met:

1. All aerial photography is secured within the requirements outlined in this RFP
2. All aerial photography is secured within a single flight season

2.5.6 Image Post-Processing

Image post-processing shall be performed in accordance with manufacturer's specifications. Offeror will be required to provide samples to the State for review prior to processing each production block. The State will review the samples and make recommendations on any changes, if necessary. Once the changes have been made, the samples will be re-submitted for approval. The approved samples shall provide a baseline for post-processing the remaining imagery.

The final processed RGB and NIR TIFF Images are required deliverables to the State. These images shall be compressed using JPEG2000 and should have a radiometric depth of at least 12-bits per channel. The offeror is required to deliver this data on a hard drive or multiple hard drives that will become the property of the State.

A QA/QC report verifying the Offeror Imagery QC process for the imagery shall be provided with each processed image delivery.

Imagery will be reviewed by the State and/or its QA/QC offeror. The offeror will not be authorized to begin digital orthophoto production until the post-processed images have been thoroughly catalogued, reviewed and approved.

In the proposal response, the offeror should clearly address special emphasis in the production process to reducing obscurity due to deep shadows.

2.6 Aerial Triangulation

Aerial triangulation must be used to densify the control solution. Direct geo-referencing is not allowed as a substitute for a fully adjusted AT solution. The offeror must detail their procedures for performing aerial triangulation including the QA/QC steps employed during this process. If an independent QA/QC firm is to perform the AT review that shall be specifically stated in the proposal.

It is recognized that AT blocks will not correspond to counties. The contractor as part of the Project Workplan shall identify AT blocks to be established and the criteria for establishing.

The final aerial triangulation report and digital solution will be delivered to the State for thorough review and analysis. The State will work with the Offeror to define a consistent format for the deliverable AT solutions.

2.7 Digital Elevation Model

The State will provide a DEM derived from the aforementioned Maryland DNR LiDAR dataset. Because this DEM was collected during different years, from varying altitudes, with varying densities, the State cannot guarantee that the DEM is completely uniform. However, we believe the DEM, with minimal photogrammetric updates as required, should be sufficient for the development of digital orthophotography at the accuracies and resolutions requested in this RFP.

In cases where the LiDAR DEM is not available a DTM used for contour mapping and/or orthorectification will be provided in an ESRI compatible format.

If full DEM coverage does not exist for the area requiring orthorectification (e.g. areas outside the County boundary and within the mapping limit area) then USGS National Elevation Dataset (NED) data may be approved for use by the State. The contractor should indicate if a lower level of accuracy should be assumed for these perimeter "fill in areas".

2.7.1 Surface Updates

The state does expect that some spot updates to the provided elevation model may be necessary to support orthophoto production in 2011. The State and participating local partners will work to provide the successful offeror with locations that may potentially require updates to the DEM. However, it is the sole responsibility of the offeror to ensure the DEM is upgraded to properly support orthophoto production.

It is expected that any surface updates will be made only to the requirements necessary to support the orthorectification process. The State does not require the updates be consistent with that of a DTM capable of supporting contour modeling or other engineering applications. An ortho-ready DTM/DEM is all that is required for this project.

2.8 Digital Orthophotography

This Section describes the specifications for the production of the digital orthophotography. Offeror proposals shall clearly state and explain the compliance, or non-compliance with these requirements.

The State of Maryland tiling schema was previously comprised of 54,083 tiles (2000' * 3000') non-overlapping ortho tiles. A new tile layout will be established to cover 4000' by 6000' tiles. All data products are required to confirm to the geographic extents and naming conventions of the newly developed tile index. The previous tile grid has been provided as part of this proposal.

Partial tiles or "no data areas" are acceptable at the State mapping boundary as earlier described. However, partial tiles or "no data areas" are not acceptable in the areas that join the State's standard product with buy-up areas.

2.8.1 4-Band Resultant Imagery

The primary product requested by the State of Maryland is a statewide set of 4-band digital orthophotos with a 0.5' ground pixel resolution. All digital orthophotography shall be produced in accordance with the accuracy requirements outlined herewith in. All buy-ups for a 0.25' ground pixel resolution are also required to be a stacked 4-band product.

All image products are required to be 100% compliant with the size, position and naming conventions of the tiling schema that is developed for this project.

The State requires that the spatial reference for each GeoTIFF be established to allow for easy re-projection in ArcGIS. The .aux file shall be delivered with the .tif and .tfw files.

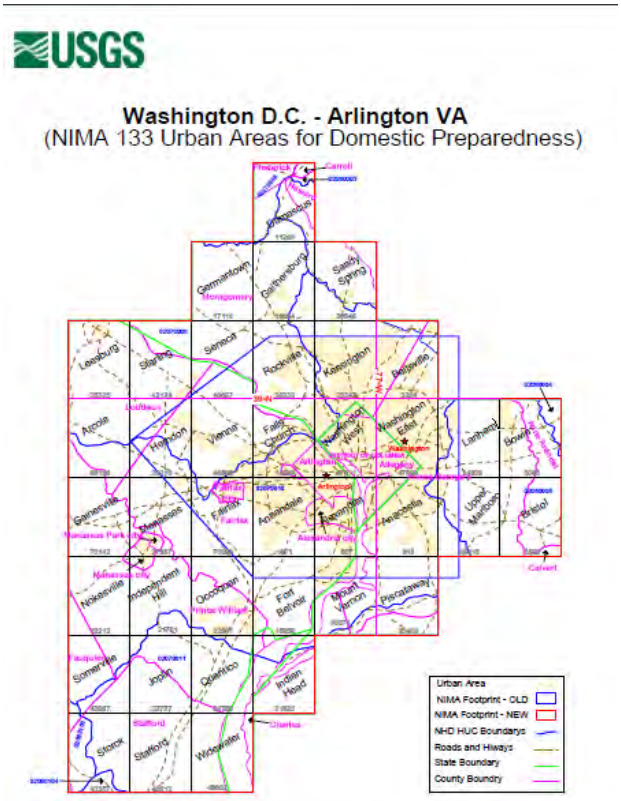
2.8.2 Compressed Imagery

Once the color and near infrared image products have been accepted, the offeror will be required to produce a complete set of MrSID compressed county mosaics at a compression ratio to be agreed upon at a later date.

The State requires that the spatial reference for each MrSID be established to allow for easy re-projection in ArcGIS. The .aux file shall be delivered with the .sid and .sdw files.

2.8.3 **USGS Imagery**

USGS will be participating in t he State program. They have defined 2 areas of interest. One is for the Baltimore urban area and the other is for the Washington, DC urban area. The State will provide one set of 4-band imagery in GeoTIFF format to USGS as part of this project. Their area of interest is shown in the figures below. The contractor selected for this procurement will be responsible for the Maryland areas only. No additional acquisition or ortho production work will need to be completed for the surrounding jurisdictions, other than for the buffer areas.



2.9 Oblique Imagery (Optional)

The State has an interest in receiving and technical and cost proposal information for oblique imagery solutions. Although the acquisition of oblique imagery is not planned at this time, the State and its partnering local government agencies may be interested in procuring oblique imagery as an additional (secondary) value added product. Oblique imagery would be acquired with a digital camera system optimized for acquisition and processing of oblique imagery. It is assumed this would be a separate flight and camera system than what is used for the orthophotography. Oblique imagery would be acquired in leaf off conditions (spring or fall) on a city or County-wide basis. Pricing options for 4", 6", and 12"oblique imagery solutions can be presented. Options may also be presented for licensed and unlicensed products. Oblique imagery procured under this contract vehicle could be procured by the State or may be contracted directly by one or more of the local government agencies throughout the State.

2.10 Statewide LiDAR (Optional)

The State has an interest in receiving an optional cost to develop a new, statewide LiDAR-derived product flown in one flight season and produced as a single project. If this option is chosen, it is assumed that this product would be used as the elevation source for performing the digital orthophoto production. The State is also receiving an optional cost to develop LiDAR for selected regions/Counties.

For the Statewide project, the area shall be the same as required for the digital orthophotography. For the regional or county based option the minimal area would be 300 square miles. For all options the FEMA Guidelines and Specifications for Flood Hazard Mapping (Appendix A). The LiDAR vertical accuracy will be tested and is required to meet both FEMA/NSSDA and ASPRS/NDEP standards for elevation data with vertical accuracy equivalent to support 2-foot contours.

2.10.1 LiDAR Project Initiation Plan

A detailed project plan must be submitted for approval prior to any data acquisition activities. The plan shall consist of the following:

- Schedule (data acquisition, data processing, data delivery)
- Project personnel with contact information of the project and field operation manager(s)
- Proposed flight lines in shapefile and graphic format
- Base station locations in shapefile and graphic format as well as supporting NGS control information
- Proposed baseline lengths for aerial collection
- Calibration testing methodology(s)
- LiDAR collection parameters (flying height, Scan FOV full angle, pulse rate, scanner frequency, side-lap percentage, point density etc.)
- Proposed acquisition windows including maximum PDOP values
- Description of internal verification quality control processes;
  - Data validation
  - Pre-processing and accuracy check
  - Processing quality control
  - Product delivery quality control

2.10.2 LiDAR Data Acquisition Parameters

LiDAR data shall be collected using an approved fully calibrated system capable of collecting multiple echoes per pulse with a minimum of a first, last, and one intermediate return. The system must also be able to collect the intensity (LiDAR pulse signal strength) for each return signal.

2.10.3 Sensor Calibration

Full system calibration and routine maintenance should be up-to-date to ensure full functionality of the LiDAR system to meet and exceed project accuracies and requirements. Full calibration reports should be available if requested. Bore site calibrations shall be performed at the beginning and end of the project and as needed throughout the data collection period. Alternative testing methodologies may be used upon review and acceptance by the State prior to any data acquisition activities.

2.10.4 LiDAR Density Requirements

The final LiDAR resolution shall have, at a minimum, a nominal post spacing of 1.4 meters.

2.10.5 Acquisition Window and Constraints

LiDAR acquisition shall occur during leaf-off conditions in the spring of 2011. Prior consent will be required before the initial project data collection. Additionally 24 hour notice shall be given to the State POC by phone or email which is for information purposes only, not permission to proceed.

The acquisition area shall be free of snow and shall be free of flood conditions with rivers remaining in their channels and near average heights. Extraneous environmental conditions such as rain, fog or smoke shall be avoided.

The LiDAR provider shall ensure that the project area is fully and sufficiently covered with no data voids due to data holidays (i.e. gaps between flight lines) and/or from system malfunctions. Data voids in the bare-earth not caused by classification of geographic features shall not exceed three times the point spacing. Data voids of this size are unacceptable and shall be sufficient reason to reject the entire sub-project dataset.

2.10.6 LiDAR Data Format

Mass point data shall be delivered in LAS files utilizing the latest LAS specification (currently LAS 1.2) containing all LAS items of point data record format 1. The header file should contain all system generated LAS items as defined in the Public Header Block and as a minimum must contain the "File Creation Year Day" and "File Creation Year" which will represent the final deliverable generated LAS date. The projection information for the point data must be specified in the Variable Length Record using the appropriate GeoTIFF tags.

The classification codes will follow the ASPRS Standard LiDAR Point Classes utilizing the following:

- **Class 1 – Unclassified**: Class 1 will be used for feature points that are not in Classes 2, 7, 9, or 12. These typically represent returns from man-made structures, vegetation etc.
- **Class 2 – Ground:** Class 2 will be used for feature points that represent the bare-earth.
- **Class 7 – Low point and noise:** Class 7 will be used for artifacts that do not represent the ground, manmade structures or vegetation. Typically these are extraneous points that are either below, or well above the surface not representing any true feature.
- **Class 9 – Water:** Class 9 will be used for water
- **Class 12 – Overlap:** Class 12 will be used for LiDAR points in the overlap portion of flight lines that have been removed due to redundancy.

No points shall be deleted from the LAS file.

Bare-earth classification shall adhere to the follow specifications using both automated and manual filtering classification routines:

- 90% of artifacts classified
- 95% of outliers classified
- 95% of vegetation classified
- 98% of buildings classified

Special attention must be applied to the classification process due to the geographic nature of the project area which consists of extremely flat terrain mixed with important hydrographic characteristics. Channel geometry of streams and drainage features must be maintained as well as the ability to identify sand bar features and swamp areas. Dense vegetation data voids must also be minimized by the automatic removal process and "over smoothing" due to aggressive classification must be avoided.

2.10.7 Ground Control to support LiDAR

All survey conducted under this project shall be referenced to National Geodetic Survey (NGS) control monuments in the National Spatial Reference System (NSRS) using appropriate horizontal and vertical control. Ideally checkpoint surveys should utilize or tie into the same base station control monuments used for the aerial acquisition to eliminate the possibility of discrepancies between different control stations. Base station locations should be the "best" horizontal (second order or better) and vertical (third order or better) available and have a stability of "C" or better. In the event that no suitable base station monuments exist, new primary ground control will be required and shall conform to the Standards and Specifications for Geodetic Control Networks (1984), Federal Geodetic Control Committee (FGCC). Primary control monuments established with GPS shall meet or exceed NOS NGS-58 "Guidelines for Establishing GPS-Derived Ellipsoid Heights (Standards: 2 cm and 5 cm)" using the appropriate latest geoid model and should be monumented to maintain stability. Ground control stations are expected to have local network accuracy at the 95% confidence level of 2 cm horizontally and vertically. Sound geodetic principles should be applied when establishing new stations and must include the appropriate supporting documentation such as processing reports, minimally and constrained 3-D least squares adjustment, pictures of the station, etc.

For aerial acquisition a minimum of two base stations capable of collecting dual frequency data at 1 Hz is required. Baseline lengths to achieve the desired accuracy should not exceed 25 miles. For quality control,

forward and reverse processing of the trajectories should yield similar results and these comparisons should be made available if requested. Additionally other quality statistics from the airborne GPS/IMU processing such as DOP values, resolved ambiguity reports, accelerometer and gyro drift and scale factors etc. should be made available if requested.

2.10.8 Breaklines

The state does not require breaklines to be captured to supplement the LiDAR data and to support future engineering modeling applications.

Additional breakline data capture may be requested as an optional service. Costs for this work shall be estimated separately from LiDAR acquisition and processing. This supplemental breaklining would likely be done on a project or Countywide basis. For estimating purposes the following breakline features are assumed:

Single Line Hydrographic Features

Linear hydrographic features such as streams, shorelines, and embankments, etc. with an average width less than 20 feet and at least ½ mile in length shall be captured as a single line hydrographic feature. In the case of embankments, if the feature forms a natural dual line channel, then capture it consistent with the capture rules to be further defined with the selected offeror. Ditches or canals that meet the minimum criteria should be captured in this feature class as well.

2.10.8.1 Dual Line Hydrographic Features

Linear hydrographic features such as streams, shorelines, and embankments, etc. with an average width greater than 20 feet and at least ½ mile in length shall be captured as a dual line hydrographic feature. In the case of embankments, if the feature forms a natural dual line channel, then capture it consistent with the capture rules to be further defined with the selected offeror. Ditches or canals that meet the minimum criteria should be captured in this feature class as well.

2.10.8.2 Closed Water Body Features

Land/water boundaries of constant elevation water bodies such as lakes, reservoirs, ponds, etc., shall be defined as closed polygons and contain an elevation value that reflects the best estimate of the water elevation at the time of data capture. Water body features will be captured for features one-half acres in size or greater.

2.10.9 General Breakline Requirements

The following breakline characteristics must be maintained throughout the project:

- Hydro breaklines: complete for all rivers, streams, lakes, ponds, and reservoirs; breaklines for lakes, ponds and reservoirs should reflect level surfaces.
- Hydro breaklines shall flow downhill and shall not undulate
- Vertical consistency: vertices should not have a 0 elevation; vertices should not have excessive min or max z-values when compared to adjacent vertices.
- Topology: breaklines should not intersect unless at the same elevation

2.10.10 Accuracy

Vertical elevations will be required to meet or exceed 18.5 cm $RMSE_z$ ($Accuracy_z$ = 0.363m at the 95% confidence level). Vertical accuracy should be tested by the offeror for validation purposes. The final data will also be tested by the State's QA/QC offeror.

2.10.10.1 Absolute Accuracy Testing

The bare-earth LiDAR DTM will be tested using both NSSDA/FEMA and the ASPRS/NDEP methods. The NSSDA/FEMA method specifies that accuracy should be reported at the 95% confidence level for data tested by an independent source of higher accuracy for horizontal and/or vertical accuracy using a user defined threshold.

Data tested with the NSSDA/FEMA method shall use the following statements:

Tested___(meters) horizontal accuracy at 95% confidence level
Tested___(meters) vertical accuracy at 95% confidence level

Per NSSDA guidelines, $Accuracy_r = RMSE_r$ X 1.7308 and $Accuracy_z = RMSE_z$ X 1.9600 at the 95% confidence level. However the RMSE is only valid when the errors follow a normal distribution which may not always be the case with LiDAR data, particularly in vegetated land cover categories. Therefore the LiDAR elevation data will also be tested using the ASPRS/NDEP method which acknowledges that vegetated land cover may not follow a normal error distribution. The ASPRS/NDEP methods mandate the use of Fundamental Vertical Accuracy (FVA) in open terrain and provides for the optional use of Supplemental Vertical Accuracy (SVA) in other individual land cover categories and Consolidated Vertical Accuracy (CVA) in all land cover categories combined. FVA is calculated at the 95^{th} percent confidence level as a function of $RMSE_z$. SVA and CVA are calculated at the 95^{th} percentile, where 95% of elevations errors have elevation errors equal to or less that the 95^{th} percentile.

Data tested with the ASPRS/NDEP method shall use the following statements:

Tested___(meters) fundamental vertical accuracy at 95% confidence level in open terrain using $RMSE_z$ X 1.9600

Tested___(meters) supplemental vertical accuracy at 95^{th} percentile in (specify land cover category or categories)

Tested___(meters) Consolidated vertical accuracy at 95^{th} percentile in (specify land cover category or categories)

Both NSSDA/FEMA and ASPRS/NDEP do not require independent testing of horizontal accuracy for elevation products. Therefore if not tested, the following statement will be used:

Compiled to meet___ (meters) horizontal accuracy at 95% confidence level

However, the horizontal accuracy of the LiDAR data may be tested by utilizing the intensity imagery and the full point cloud with intensity values.

2.10.10.2 Relative Accuracy

The vertical accuracy testing uses survey measurements at discrete locations to compute the errors which verify the absolute error. This coupled with relative accuracy (e.g. how one points fits relative to the next, and how one flight line fits relative to the adjacent line) defines the combined accuracy of the dataset. Data therefore should not have discontinuities between adjacent flight lines or corn rows of undulating elevations due to mismatches and sensor anomalies.

No offsets or cornrows should be greater than 20 cm. Data exceeding these amounts may not cause the whole dataset to fail but may be rejected.

2.11 Metadata and Reports (Imagery and LiDAR)

Metadata compliant with the Federal Geographic Data Committee's (FGDC) Content Standard for Digital Geospatial Metadata is required in extensible markup language (.xml) format. Metadata should be created on a project level for each product deliverable stated for both the orthophotography and LiDAR deliverables. The state does not require tile level metadata to be developed.

Metadata shall include as a minimum the following sections;

- Identification Information
- Data quality information (this section will be updated by the state's QA/QC offeror after the quantitative assessment) and must include all process steps.
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Metadata Reference Information

Metadata fields shall also include as a minimum;

- Date of acquisitions
- System type and system collection parameters
- Nominal point density (Optional LiDAR Only)
- Calibration procedures (Optional LiDAR Only)
- Base station control information

Metadata may also be supplemented with projects reports where the report conveys additional information not suitable for metadata. If surveying to establish new stations was performed, a survey report is required.

2.12 Media and Data Ownership (Imagery and LiDAR)

All products will be delivered on USB external hard drives for each project area as defined in the project initialization phase with the selected offeror and will become the property of the State. All media and data collected under this contract shall be the sole property and can be freely distributed by the State and its Federal and local government partners. All the delivered data is also to be unlicensed, and releasable to the public without cost or use restrictions.

2.13 Technical Assistance

The TO contractor shall be prepared to provide up to 100 hours of ad-hoc, to be defined technical assistance. This will be done on a task order basis for specifically defined tasks related to this project. It can be used for supplemental data production or processing activities and/or activities related to integration/loading of data into the iMAP infrastructure currently housed at the Center for GIS at Towson University. It may also be used for other technical assistance tasks at the State's discretion. The offeror' and the State will mutually agree on the tasks to be performed and the level of effort associated with each task.

2.14 Quality Assurance Inspection of Deliverables

The State requires each offeror to provide a process workflow of its approach to QA/QC. Of specific interest is when each QA/QC step occurs in the production process. In addition to the process map, each offeror should discuss its procedures to ensure data conformance to the requirements outlined herewith in.

The State's desire is to have a single contract for the imagery program, and to have an independent QA/QC process built into this program. The QA/QC contractor may serve as a prime contractor or may be a subcontractor to the production contractor. The State reserves the right to award a separate contract for independent QA/QC services irrespective of what is proposed as part of this project. The State also will establish an internal QC team and will provide an opportunity for its local partners to review the data products provided.

The State is interested in online QA/QC tools that would allow each locality to review data for its jurisdiction as part of the process without multiple copies of the imagery needing to be distributed to its partners. These tools should enable the QA/QC reporting to done in a consistent manner across jurisdictions.

2.15 One Pass QA/QC

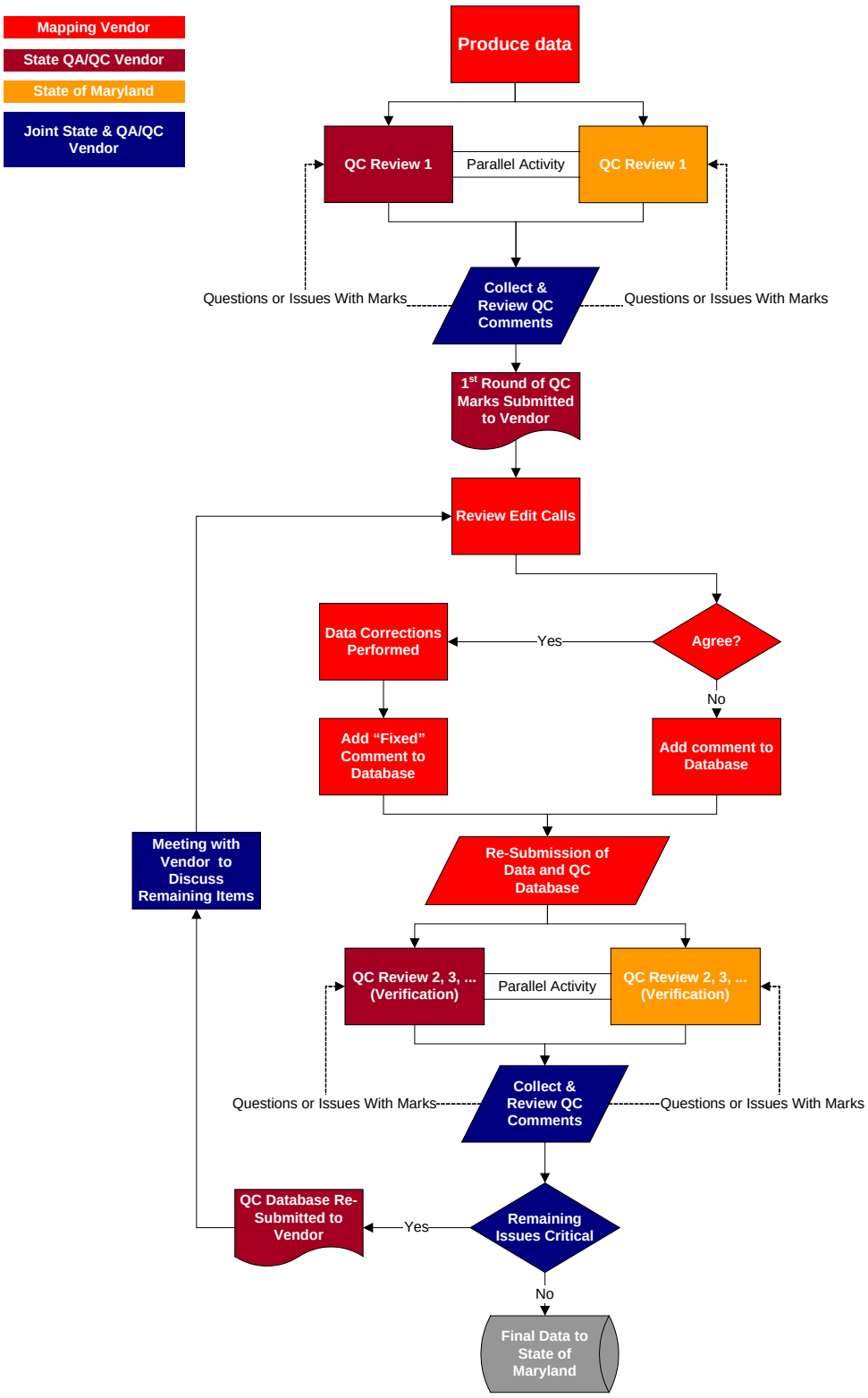
In an effort to streamline the quality review and acceptance process, a "One-Pass" review cycle applies to this project. This review cycle is designed to alleviate the production bottleneck that can be caused with iterative cycles of product rejection to resolve minor discrepancies in the digital orthophotography. This approach is a direct result of lessons learned during the previous orthophotography.

The work flow process for the One Pass Review Cycle is as follows:

1. The State and its QA/QC team will perform a comprehensive quality evaluation of the initial data delivery from the successful offeror. This evaluation will identify all failures, discrepancies and systematic errors as defined by the acceptance criteria.
2. The State and its QA/QC team will utilize a common suite of tools for performing the data assessment. The result is a single database containing pre-defined error calls that will be submitted to the offeror for correction. All valid edit calls will be fixed. The state has the final authority as to whether or not a feature shall be corrected.
3. It is expected that the offeror will address all One Pass discrepancies regardless of the overall % of acceptance for the data. If there are discrepancies, those will need to be reviewed one at a time to build a team consensus. Simply marking the database with numerous calls stating "Not an Error" or something similar will not be acceptable to the State.
4. Upon redelivery, The State and its QA/QC team will perform a second review validating that the original edit calls were addressed and that no new errors have been introduced during this process.

The benefits of the offeror accepting this process is the knowledge that there will be one comprehensive review of the data and the secondary (and beyond) reviews will only be to validate that errors have been corrected properly. Neither the State nor its QA/QC team will use the secondary review (or beyond) to inspect for additional errors that may have been omitted in the initial QA process. The one-pass review process will include comments from the respective counties that are involved in this project.

The process diagram below illustrates the One Pass review cycle.


Mapping Vendor
State QA/QC Vendor
State of Maryland
Joint State & QA/QC Vendor
Produce data
QC Review 1
Parallel Activity
QC Review 1
Questions or Issues With Marks
Collect & Review QC Comments
Questions or Issues With Marks
1st Round of QC Marks Submitted to Vendor
Review Edit Calls
Data Corrections Performed
Yes
Agree?
No
Add "Fixed" Comment to Database
Add comment to Database
Meeting with Vendor to Discuss Remaining Items
Re-Submission of Data and QC Database
QC Review 2, 3, ... (Verification)
Parallel Activity
QC Review 2, 3, ... (Verification)
Questions or Issues With Marks
Collect & Review QC Comments
Questions or Issues With Marks
QC Database Re-Submitted to Vendor
Yes
Remaining Issues Critical
No
Final Data to State of Maryland

2.15.1 Service Level Agreement

Not applicable.

2.15.2 Back-Up/Disaster Recovery

The TO Contractor shall be responsible for assuring that all data is retained and available for processing up to and including delivery and acceptance testing. This may include performing backups of the raw, pre-processed and delivery imagery on a regular basis. Backups may be retained at the TO Contractors discretion once the final product has been accepted in writing by the State.

2.15.3 Hardware, Software, and Materials

The TO Contractor is responsible for providing all hardware, software and materials at its own expense required to meet the delivers and schedule identified in this TORFP.

2.16 DELIVERABLES

2.16.1 Deliverable Submission Process

For each written deliverable, draft and final, the TO Contractor shall submit to the TO Manager one hard copy and one electronic copy compatible with Microsoft Office 2000, Microsoft Project 2000 and/or Visio 2000.

Written deliverables defined as draft documents must demonstrate due diligence in meeting the scope and requirements of the associated final written deliverable. A draft written deliverable may contain limited structural errors such as poor grammar, misspellings or incorrect punctuation, but must:

- Be presented in a format appropriate for the subject matter and depth of discussion.
- Be organized in a manner that presents a logical flow of the deliverable's content.
- Represent factual information reasonably expected to have been known at the time of submittal.
- Present information that is relevant to the Section of the deliverable being discussed.
- Represent a significant level of completeness towards the associated final written deliverable that supports a concise final deliverable acceptance process.

Upon completion of a deliverable, the TO Contractor shall document each deliverable in final form to the TO Manager for acceptance. The TO Contractor shall memorialize such delivery in an Agency Receipt of Deliverable Form (Attachment 8). The TO Manager shall countersign the Agency Receipt of Deliverable Form indicating receipt of the contents described therein.

Upon receipt of a final deliverable, the TO Manager shall commence a review of the deliverable as required to validate the completeness and quality in meeting requirements. Upon completion of validation, the TO Manager shall issue to the TO Contractor notice of acceptance or rejection of the deliverables in an Agency Acceptance of Deliverable Form (Attachment 9). In the event of rejection, the TO Contractor shall correct the identified deficiencies or non-conformities. Subsequent project tasks may not continue until deficiencies with a deliverable are rectified and accepted by the TO Manager or the TO Manager has specifically issued, in writing, a waiver for conditional continuance of project tasks. Once the State's issues have been addressed and resolutions are accepted by the TO Manager, the TO Contractor will incorporate the resolutions into the deliverable and resubmit the deliverable for acceptance. Accepted deliverables shall be invoiced within 30 days in the applicable invoice format.

A written deliverable defined as a final document must satisfy the scope and requirements of this TORFP for that deliverable. Final written deliverables shall not contain structural errors such as poor grammar, misspellings or incorrect punctuation, and must:

A) Be presented in a format appropriate for the subject matter and depth of discussion.

B) Be organized in a manner that presents a logical flow of the deliverable's content.

C) Represent factual information reasonably expected to have been known at the time of submittal.

D) Present information that is relevant to the Section of the deliverable being discussed.

The State required deliverables are defined below. Within each task, the TO Contractor may suggest other subtasks or deliverables to improve the quality and success of the project.

2.16.2 Deliverable Descriptions/Acceptance Criteria

All deliverables will undergo a detailed review and acceptance testing process prior to acceptance. A complete list of deliverable is described within the document and included as a summary below.

Time frames for deliverables should be proposed by Master Contractors in their Technical Proposals (See Section listing the deliverables below). Agencies should set overall expected time frames for completing all deliverables, e.g., "within 18 months," but should allow schedule flexibility for individual deliverables.

Timetable

Milestone	Date
RFP Released	December 16, 2010
RFP Questions Due	December 27, 2010
Responses to Submitted Questions (all-inclusive)	December 30, 2010
Proposal Due Date	January 7, 2011
Offeror Selection Date	January 17, 2011
Contract and Notice to Proceed	February 15, 2011
Flight / Control Plans Submitted	February 21, 2011
Flight	February 25-April 15 (weather dependent)
Production Schedule	Project complete April 30, 2012

2.15.2.1 Project Management Deliverables

The following deliverables are required:

- Project Workplan
- Project Meetings and Status reporting

2.15.2.2 Ground Control Deliverables

The following deliverables are required:

- ABGPS / IMU Adjustment in Microsoft Excel Format
- Two (2) copies of the final ground control point file for the State (in shapefile format)
- Ground Control report in hardcopy (1) , Word, and PDF file format
- If applicable, two (2) copies of the final ground control report for each “buy-up” locality

2.15.2.3 Aerial Photography Deliverables

The state requires, at a minimum, the following deliverables from the aerial photographic mission.

- Planned Photo Centers in Shapefile format with attributes including corresponding line and frame (or line scanner equivalent) number
- As Flown Photo Centers in Shapefile format with attributes including corresponding line and frame number that correlates to the final post-processed TIFF Images. It must also include an attribute for the date of photography, and a time stamp for acquisition to be used to verify the correct sun angle.
- Aerial Photography Mission Logs
- Final Processed (12-bits per channel or higher) RGB and NIR TIFF Images on an external Hard Drive that will not be returned. The imagery will be georeferenced with the processed airborne GPS information.
- Final processed Airborne GPS and IMU Orientation Data in comma-delimited format

2.15.2.4 Aerial Triangulation Deliverables

The following deliverables are required for each Aerial Triangulation Block:

- AT solution delivered in a format usable by other vendors for planimetric mapping purposes; and
- Two (2) copies of a final aerial triangulation report in PDF format

2.15.2.5 DEM Deliverables

The following deliverables are required:

- Any updated masspoints or breaklines must be delivered in an ArcGIS 9.3x file geodatabase within a data schema to be provided by the State.

Updated DEM data shall be delivered on a Countywide basis cut to corresponding tiles

2.15.2.6 Orthophotography Deliverables

The list of required deliverables is provided below. If buy up deliverables are contracted the list will be modified to reflect the option. Deliverables will be provided for pilot and production phases.

- One (1) complete set of countywide statewide 4-band 1”=200’ digital orthophotos with a 0.5’ ground pixel resolution in GeoTIFF format, also having associated tfw world files – US Survey Feet
- One (1) complete set of countywide statewide 4-band 1”=200’ digital orthophotos with a 0.5’ ground pixel resolution in GeoTIFF format, also having associated tfw world files – Meters
- One (1) complete set of statewide 3-band (color RGB) 1”=200’ digital orthophotos with a 0.5’ ground pixel resolution in MrSID format, also having associated sdw world files – US Survey Feet
- One (1) complete set of statewide 3-band (color RGB)1”=200’ digital orthophotos with a 0.5’ ground pixel resolution in MrSID format, also having associated sdw world files – Meters

- One (1) complete set of statewide 4-band (color RGB) 1"=200' digital orthophotos with a 0.5' ground pixel resolution in JPEG2000 format, also having associated sdw world files – US Survey Feet
- One (1) complete set of statewide 3-band (color RGB)1"=200' digital orthophotos with a 0.5' ground pixel resolution in JPEG2000 format, also having associated sdw world files – Meters
- One County-based 3-band (color RGB) 1"=200' digital orthophotos with a 0.5' ground pixel resolution in MrSID format, also having associated sdw world files – US Survey Feet. Suggested compression factor 1:80
- One County-based 3-band (color RGB) 1"=200' digital orthophotos with a 0.5' ground pixel resolution in MrSID format, also having associated sdw world files – Meters. Suggested compression factor 1:80
- One (1) FGDC-Compliant Metadata record for each image set produced
- One (1) FGDC-Compliant Metadata record for each data set produced (e.g. DEM, shoreline and state boundary buffer, etc.)

2.15.2.7 LiDAR Deliverables

The following deliverables are required:

- One (1) complete set of LAS files – US Survey Feet
- One (1) complete set of LAS files – Meters
- One (1) ESRI file geodatabase containing the requisite breaklines
- Final processed Airborne GPS and IMU Orientation Data in comma-delimited format
- Planned Flight Lines in Shapefile format with attributes including corresponding line number.
- As Flown Flight Lines in Shapefile format with attributes including corresponding line number. This shall also include an attribute for the data of acquisition for each line.
- One (1) FGDC-Compliant Metadata record for each LiDAR product produced

2.17 Metadata and Reports (Imagery and LiDAR)

Metadata compliant with the Federal Geographic Data Committee's (FGDC) Content Standard for Digital Geospatial Metadata is required in extensible markup language (.xml) format. Metadata should be created on a project level for each product deliverable stated for both the orthophotography and LiDAR deliverables. The state does not require tile level metadata to be developed.

Metadata shall include as a minimum the following sections;

- Identification Information
- Data quality information (this section will be updated by the state's QA/QC offeror after the quantitative assessment) and must include all process steps.
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Metadata Reference Information

Metadata fields shall also include as a minimum;

- Date of acquisitions
- System type and system collection parameters
- Nominal point density (Optional LiDAR Only)
- Calibration procedures (Optional LiDAR Only)
- Base station control information

Metadata may also be supplemented with projects reports where the report conveys additional information not suitable for metadata. If surveying to establish new stations was performed, a survey report is required.

2.18 Media and Data Ownership (Imagery and LiDAR)

All products will be delivered on USB external hard drives for each project area as defined in the project initialization phase with the selected offeror and will become the property of the State. All media and data collected under this contract shall be the sole property and can be freely distributed by the State and its Federal and local government partners. All the delivered data is also to be unlicensed, and releasable to the public without cost or use restrictions.

2.17.1 Quality Assurance INSPECTION of the Deliverables

This section provides the acceptance criteria that will be used to evaluate the final products produced for this program.

2.19 Orthophotography Acceptance Criteria

	Tested Characteristic	Measure of Acceptability
Inventory / Spatial Domain / Metadata Criteria		
1.	Media: External Hard Drive	Media is readable, all files accessible, no files corrupted
2.	Media label	Conforms to Maryland specifications.
3.	File organization	Files written in tile sheet order
4.	File name	Conforms to required state tiling index nomenclature
5.	GeoTIFF & .tfw format	File reads in ArcGIS, ArcMap, etc.
6.	Geographic Coverage Assessment	Verify extents of GeoTIFF header and tfw file against tile index to ensure no overlap of tiles.
7.	Pixel definition	GeoTIFF reference will be the upper left corner of the upper left-most pixel World file must reference the center of the pixel located in the upper left hand corner of the tile as the point of origin.
8.	Georeferencing	World file has correct coordinates expressed to at least 2 significant digits, and correct pixel size and pixel count
9.	Datum	Maryland State Plane Coordinate System, NAD 83 HARN Adjustment
10.	Units	U.S. Survey Feet & Meters
11.	32 bit (8 per channel) 4 band stacked image	256 levels of value for each band, 0=black, 255=white
12.	Ground Resolution	0.5', or 0.25' for buy-up
13.	Sheet size	Tiles conform to tile grid

14.	Image Compression	Check GeoTIFF header for evidence of image compression (JPEG Compression, Overviews, Tiling, etc…)
15.	Metadata	Conforms to FGDC Metadata Standard- Should run through the USGS Meta Parser tool without error.
Visual Inspection Criteria		
16.	Horizontal Displacement / Mis-Alignment	Horizontal displacement along an apparent seam line or along a tile boundary must be equal to or less than 2 pixels on well defined ground features (roads, sidewalks, curbs).
17.	Tonal quality	Check entire block for tonal balancing across and between delivery blocks as well as between deliverables with differing resolutions.
18.	Image blemishes and artifacts	Generally acceptable within these limits: If 1 pixel wide, 100 pixels in length. If 2 pixels wide, 60 pixels in length. If 3 pixels wide, 20 pixels in length. If 4 - 12 pixels wide, 12 pixels in length. Artifacts exceeding these limits may be acceptable if ground feature detail is not obscured, or if the brightness value of the pixels in the artifact is fewer than 170. Artifacts within these limits may be rejected if critical ground features are significantly impacted. Critical features shall be defined as features having County, State or National significance (i.e. Courthouses, Capitol Buildings, etc.). Clusters of artifacts that do not individually meet these criteria may be considered unacceptable if more than 12 are visible within a viewing screen at 1:1 zoom. (5 or more artifacts within a 200 pixel area preferred).
19.	Image Appearance /Smears	Image contains no extreme color, tone, or contrast variations from approved sample. Smears corrected by adding mass points or break lines to DEM as necessary to reflect actual elevation or by image processing where appropriate. Where DEM corrections or image processing will result in reduced horizontal accuracy or misrepresentation of the location or appearance of important features (buildings, roads, etc.), the smear will remain untreated.
20.	Wavy features	95% of distinct linear ground features (such as road markings, and curbs) shall be positionally correct and should not deviate from their apparent path by more than 5 pixels measured perpendicular to the feature within any 100 pixel distance measured along the feature length. On roads, measurements should be taken from centerline of

		road instead of road edges, shoulder and railings.
21.	Mosaic lines	Mosaic lines through buildings and above ground transportation structures shall be avoided through the greatest extent practial. Mosaic line placement should not result in artificial clipping of features along tile boundaries or missing photo areas anywhere within the project area. As with buildings, other minor elevation structures such as pipelines, private footbridges or boardwalks, are not rectified as elevated roadways are. Distortion of these features is not grounds for rejection of the imagery. Seam lines should not be visible at the viewing scale for which the imagery is produced. Typically they should not be visible at 1.5 times the map scale. If viewing at more than 1.5 times the map scale, some radiometric inconsistency may be apparent. Because seamlines are run around buildings and other structures, the orientation of shadows associated with trees, poles, and buildings may fall in different directions on the imagery, or may in some cases result in multiple shadows for a feature. Seam lines will not be edited to reflect shadow orientation.

2.19.1 **Orthophoto Horizontal Accuracy Criteria**

1"=200'-scale (Standard Product)		
29.	RMSE of known ground points measured on the image *See ASPRS Class I Standards Page 8, Table 16, and NSSDA Part 3, Appendices 3-A and 3-D for explanation of formulas.*	$RMSE_x = RMSE_y = 2.000'$ and $RMSE_r = 2.828'$
30.	Absolute accuracy. $Accuracy_r$ = horizontal (radial) accuracy at 95% confidence level = $RMSE_r$ x 1.7308	NSSDA accuracy (20+ points) such that 95% of the points tested shall meet the criteria of $\leq 5.000'$
31.	Mismatch of features along mosaic lines and production block boundaries of equal scale	Equal to or less than 2 pixels at 95 % on well defined features (roads, sidewalk curbs) for mosaic lines
1"=100' (Buy-Up Resolution to 3" and Accuracy)		
32.	Ground resolution	0.25' US Survey Feet
33.	RMSE of known ground points measured on the image *See ASPRS Class I Standards Page 8, Table 16, and NSSDA Part 3, Appendices 3-A and 3-D for explanation of formulas.*	$RMSE_x = RMSE_y = 1.000'$ and $RMSE_r = 1.414'$

34.	Absolute accuracy. $Accuracy_r$ = horizontal (radial) accuracy at 95% confidence level = $RMSE_r$ x 1.7308	NSSDA accuracy (20+ points) such that 95% of the points tested shall meet the criteria of ≤2.500’
35.	Mismatch of features along mosaic lines and production block boundaries of equal scale	Equal to or less than 2 pixels at 95 % on well defined features (roads, sidewalk curbs) for mosaic lines

2.19.2 Digital Elevation Model QA Acceptance Criteria

Please note this applies only to DEM updates used for the orthophoto solution.

	Tested Characteristic	Measure of Acceptability
36.	File organization	ESRI File Geodatabase for the entire delivery area
37.	File name	Conforms to required convention
38.	Format	ESRI File Geodatabase, all features have x, y, z values
39.	Breaklines & mass point locations	Sufficient to accurately build elevation to support ortho
40.	Mass point locations	Masspoints and supplemental breaklines as needed for orthorectification, none in open water. Water bodies level.
41.	Continuity	No spikes or holes, no gaps of sufficient size to affect orthorectification, regardless of perspective center.
42.	Attributes	Conform to DEM standard

2.19.3 Aerial Triangulation Acceptance Criteria

1”=200’ (Standard Product)		
	Tested Characteristic All Scales	**Measure of Acceptability**
43.	Report Format	Conforms to required convention (to be determined with the State in pilot phase). Each block of triangulation shall have a separate report.
44.	Report Completeness	All information complete and readable
45.	Precision of Image Observations	Sigma (0) less than or equal to 5 microns is acceptable.
46.	Horizontal accuracy against ground control check points tested in accordance with 10+ points at NSSDA criteria	RMSE values are acceptable up to 1/9,000’ for individual AT blocks in the X and Y direction. Higher RMSE values are subject to review.
47.	Vertical accuracy against ground control check points tested in accordance with 10+ points at NSSDA criteria	RMSE values are acceptable up to 1/7,500 of flying height for the 200 scale AT blocks. Higher RMSE values are subject to review.

48.	Accuracy against image coordinates	RMSE less than or equal to 5 microns is acceptable.
49.	Max. offsets [E, N] to any one blind QA point	3 * RMSE for that scale
50.	NSSDA analysis [E, N] of 40 QA points	95% within 1.73 * RMSE for that scale

1"=100' (Buy-Up Resolution to 3" and Accuracy)		
	Tested Characteristic All Scales	**Measure of Acceptability**
59.	Report Format	Conforms to required convention (to be determined with the State in pilot phase). Each block of triangulation shall have a separate report.
60.	Report Completeness	All information complete and readable
61.	Precision of Image Observations	Sigma (0) less than or equal to 5 microns is acceptable.
62.	Horizontal accuracy against ground control check points tested in accordance with 10+ points at NSSDA criteria	RMSE values are acceptable up to 1/10,000' for individual AT blocks in the X and Y direction. Higher RMSE values are subject to review.
63.	Vertical accuracy against ground control check points tested in accordance with 10+ points at NSSDA criteria	RMSE values are acceptable up to 1/9,000 of flying height for the 100 scale AT blocks. Higher RMSE values are subject to review.
64.	Accuracy against image coordinates	RMSE less than or equal to 5 microns is acceptable.
65.	Max. offsets [E, N] to any one blind QA point	3 * RMSE for that scale
66.	NSSDA analysis [E, N] of 40 QA points	95% within 1.73 * RMSE for that scale

2.20 LiDAR Acceptance Criteria

	Tested Characteristic	**Measure of Acceptability**
Inventory / Spatial Domain / Metadata Criteria		
67.	Media: External Hard Drive	Media is readable, all files accessible, no files corrupted
68.	Media label	Conforms to Maryland specifications.
69.	File organization	Files written in tile sheet order
70.	File name	Conforms to required state tiling index nomenclature
71.	LAS format	File conforms to LAS 1.2 standard
72.	Geographic Coverage Assessment	Verify extents of LAS to ensure no overlap of tiles.

73.	Projection	MARYLAND STATE PLANE COORDINATE SYSTEM
74.	Datum	NAD 83 HARN Adjustment
75.	Units	U.S. Survey Feet & Meters
76.	LiDAR Density	Density statistics yield a nominal post spacing of 1.4 meters or better
77.	Sheet size	Tiles conform to tile grid
78.	Classifications	Data is contained in all required classes
79.	Metadata	Conforms to FGDC Metadata Standard- Should run through the USGS Meta Parser tool without error.
Visual Inspection Criteria		
80.	Artifacts	90% of artifacts removed and 95% of outliers removed
81.	Data Continuity	No significant gaps in data; no vertical offsets > 20 cm between adjoining strips and/or tiles
82.	Processing & Classification	Inconsistent post-processing and editing; no visible variations in the DTM caused by differing processing techniques; No mis-classified features
83.	Smoothing	Over-smoothing; smoothing techniques shall not remove topographic features necessary to define drainage features.
Breakline Inspection Criteria		
84.	File Type	Delivered in ESRI file geodatabase format and in conformance with a data model to be developed between the State and the selected offeror
85.	Data Integrity	All topologies and data collection rules to be developed between the State and the selected offeror are validated
86.	Completeness	All required features have been collected.

2.20.1 LiDAR Flight Checks

Flight Requirements		
87.	Boresight/calibration data check	RMSEr ≤ 1.0 meter
88.	GPS Trajectories	Within 4-8 cm forward and reverse comparisons
89.	General Flight Parameters	Flight lines flown as planned with stated sidelap, correct altitude, PDOP ≤ 4; and no data holiday.

2.20.2 LiDAR Accuracy Acceptance Criteria

Vertical Accuracy		
90.	Fundamental Vertical Accuracy	FVA ≤ 36.3 cm based on $RMSE_z$ ≤ 18.5 cm in open terrain category
91.	Consolidated Vertical Accuracy	CVA ≤ 36.3 cm based on 95th percentile in all land cover categories combined
92.	Supplemental Vertical Accuracy	SVA target ≤ 36.3 cm based on 95th percentile in each individual land cover category. This is a target for weeds and crops (≤ 3' tall); scrub (≤6' tall); forested (>6' tall); and urban areas.

2.21 Required Project Policies, Guidelines and Methodologies

The TO Contractor shall be required to comply with all applicable laws, regulations, policies, standards and guidelines affecting information technology projects, which may be created or changed periodically. The TO Contractor shall adhere to and remain abreast of current, new, and revised laws, regulations, policies, standards and guidelines affecting project execution. The following policies, guidelines and methodologies can be found at http://doit.maryland.gov/policies/Pages/ContractPolicies.aspx under "Policies and Guidance." These may include, but are not limited to:

- The State's System Development Life Cycle (SDLC) methodology
- The State Information Technology Security Policy and Standards
- The State Information Technology Project Oversight
- The State of Maryland Enterprise Architecture
- The TO Contractor shall follow the project management methodologies that are consistent with the Project Management Institute's Project Management Body of Knowledge Guide. TO Contractor's staff and sub Contractors are to follow a consistent methodology for all TO activities.

2.22 Contractor Qualifications

The TO Contractor shall be capable of furnishing all necessary services required to successfully complete all tasks and work requirements and produce high quality deliverables described herein. The Master Contractor shall demonstrate, in its proposal, that it possesses such expertise in-house or has fostered strategic alliances with other firms for providing such services:

The Master Contractor must document a professional level of expertise in:

- Digital orthophoto data collection, processing and delivery;
- Project management of digital orthophoto data collection, processing and delivery;
- Deploying, operating and managing the safe operation of the fixed-wing aircraft;
- Obtaining any necessary flight clearances required to access the operational area;
- Managing the large amount of digital data associated with digial orthophoto image collection and processing;
- Acquiring, processing and validating the ground survey, digital surface model, the Inertial Measurement Unit (IMU) and the Differential Global Positioning System (DGPS);
- Color balancing image tiles;
- Generating digital orthophoto imagery;
- Demonstrated successful Quality Assurance and Quality Control processes;

2.23 Government Furnished Materials

The state will provide the following data for the purposes of estimating and project planning:

- Project Boundary shapefiles – land area and political boundaries
- Existing geodetic network shapefile
- Boundaries of selected local buy-up project areas
- Existing (2007) tile layout

These data files can be downloaded as a zip file at
http://planning.maryland.gov/tempDload/Ortho RFP Data Files.zip

The Contractor will be responsible for developing the map tile index and corresponding buffer area(s).

2.24 Retainage

Agencies may elect to structure the TO to withhold a portion (typically ten percent) of the total TO value until acceptance of all deliverables under the TO. Retainage is an incentive device to ensure the TO Contractor completes all work and/or completes all work within the TO deliverable schedule.

2.25 Invoicing

Payment will only be made upon completion and acceptance of the deliverables defined in Section 2.5.

Invoice payments to the TO Contractor shall be governed by the terms and conditions defined in the CATS II Master Contract. A proper invoice for payment shall contain the TO Contractor's Federal Tax Identification Number, as well as the information described below, and must be submitted to the TO Manager for payment approval. Payment of invoices will be withheld if a signed Acceptance of Deliverable form – Attachment 9, is not submitted.

The TO Contractor shall submit invoices for payment upon acceptance of separately priced deliverables, on or before the 15th day of the month following receipt of the approved notice(s) of acceptance from the TO Manager. A copy of the notice(s) of acceptance shall accompany all invoices submitted for payment.

2.25.1 Invoice Submission Procedure

This procedure consists of the following requirements and steps:

- The invoice shall identify the Maryland Department of Information Technology, Geographic Information Officer as the TO Requesting Agency, deliverable description, associated TOA number, date of invoice, period of performance covered by the invoice, and a TO Contractor point of contact with telephone number.

The TO Contractor shall send the original of each invoice and supporting documentation (itemized billing reference for employees and any subcontractor and signed Acceptance of Deliverable form – Attachment 9, for each deliverable being invoiced) submitted for payment to the Maryland Department of Information

Technology, Geographic Information Officer at the following address: Kenneth M. Miller, Maryland Department of Information Technology, Geographic Information Officer, 45 Calvert Street, Annapolis, MD 21401.

Invoices for final payment shall be clearly marked as "FINAL" and submitted when all work requirements have been completed and no further charges are to be incurred under the TOA. In no event shall any invoice be submitted later than 60 calendar days from the TOA termination date.

2.26 MBE Participation Reports

Monthly reporting of MBE participation is required in accordance with the terms and conditions of the CATS II Master Contract by the 15th day of each month. The TO Contractor shall provide a completed MBE Participation form (Attachment 2, Form D-5) to Maryland Department of Information Technology, Geographic Information Officer at the same time the invoice copy is sent. The TO Contractor shall ensure that each MBE Subcontractor provides a completed MBE Participation Form (Attachment 2, Form D-6). Subcontractor reporting shall be sent directly from the subcontractor to Maryland Department of Information Technology, Geographic Information Officer. Maryland Department of Information Technology, Geographic Information Officer will monitor both the TO Contractor's efforts to achieve the MBE participation goal and compliance with reporting requirements. The TO Contractor shall email all completed forms, copies of invoices and checks paid to the MBE directly to the TO Procurement Officer and TO Manager.

SECTION 3 - TASK ORDER PROPOSAL FORMAT AND SUBMISSION REQUIREMENTS

3.1 REQUIRED RESPONSE

Each Master Contractor receiving this CATS II TORFP must respond within the submission time designated in the Key Information Summary Sheet. Each Master Contractor is required to submit one of two possible responses: 1) a proposal; or 2) a completed Master Contractor Feedback Form. The feedback form helps the State understand for future contract development why Master Contractors did not submit proposals. The form is accessible via the CATS II Master Contractor login screen and clicking on TORFP Feedback Response Form from the menu.

3.2 FORMAT

If a Master Contractor elects to submit a TO Proposal, the Master Contractor shall do so in conformance with the requirements of this CATS II TORFP. A TO Proposal shall contain the following sections in order:

3.2.1 Technical Proposal

The Technical proposal shall contain the following information:

1) Executive Summary: A high level overview of the Master Contractor's understanding of the background, purpose, and objectives of the TORFP. The Executive Summary shall summarize the Master Contractor's capabilities and experience, and summarize the proposed methodology and solution for achieving the objectives of the TORFP.

2) Proposed Solution: A detailed narrative of the Master Contractor's proposed methodology and solution for completing the requirements and deliverables in Section 2 - Scope of Work. This section should include a comprehensive schedule of tasks and estimated times frames for completing all requirements and deliverables, including any tasks to be performed by State or third party personnel.

3) Draft Work Breakdown Structure (WBS): A matrix or table that shows a break down of the tasks required to complete the requirements and deliverables in Section 2 - Scope of Work. The WBS should reflect the chronology of tasks without assigning specific time frames or start / completion dates. The WBS may include tasks to be performed by the State or third parties as appropriate, for example, independent quality assurance tasks. If the WBS appears as a deliverable in Section 2 – Scope of Work, the deliverable version will be a final version. Any subsequent versions should be approved through a formal configuration or change management process.

4) Draft Project or Work Schedule: A Gantt or similar chart containing tasks and estimated time frames for completing the requirements and deliverables in Section 2 - Scope of Work. The final schedule should come later as a deliverable under the TO after the TO Contractor has had opportunity to develop realistic estimates. The Project or Work Schedule may include tasks to be performed by the State or third parties as appropriate.

5) Draft Risk Assessment: Identification and prioritization of risks inherent in meeting the requirements in Section 2 - Scope of Work. Includes a description of strategies to mitigate risks. If the Risk Assessment appears as a deliverable in Section 2 – Scope of Work, that version will be a final version. Any subsequent versions should be approved through a formal configuration or change management process.

6) Assumptions: A description of any assumptions formed by the Master Contractor in developing the Technical Proposal. Master Contractors should avoid assumptions that counter or constitute exceptions to TORFP terms and conditions.

7) Proposed Tools: A description of any tools, for example hardware and/or software applications that will be used to facilitate the work.

8) Proposed Personnel

Identify and provide resumes for all proposed personnel by labor category. The resume should feature prominently the proposed personnel's skills and experience as they relate to the Master Contractor's proposed solution and Section 2 – Scope of Work.

Certification that all proposed personnel meet the minimum required qualifications and possess the required certifications.

Provide the names and titles of the Master Contractor's management staff who will supervise the personnel and quality of services rendered under this TOA.

Complete and provide, at the interview, Attachment 5 – Labor Classification Personnel Resume Summary.

9) MBE Participation

Submit completed MBE documents Attachment 2 - Forms D-1 and D-2.

10) Subcontractors

Identify all proposed subcontractors, including MBEs, and their roles in the performance of Section 2 - Scope of Work.

11) Master Contractor and Subcontractor Experience and Capabilities

Provide up to seven (7) examples of projects or contracts completed that were similar to Section 2 - Scope of Work. At least three (3) of the references will be provided for Statewide or regional (multi-county) multi-participant orthophotography projects. At least four (4) of the references must be provided relevant to work completed by the prime contractor.

Each example must include contact information for the client organization complete with the following:

- Point of contact name, title, and telephone number
- Services provided as they relate to Section 2 - Scope of Work.
- Start and end dates for each example project or contract. If the Master Contractor is no linger providing the services, explain why not.
- State of Maryland Experience: If applicable, the Master Contractor shall submit a list of all contracts it currently holds or has held within the past five years with any entity of the State of Maryland. For each identified contract, the Master Contractor shall provide:
- Name of organization.
- Point of contact name, title, and telephone number
- Services provided as they relate to Section 2 - Scope of Work.
- Start and end dates for each example project or contract. If the Master Contractor is no longer providing the services, explain why not.
- Dollar value of the contract.
- Whether the contract was terminated before the original expiration date.
- Whether any renewal options were not exercised.

Note - State of Maryland experience can be included as part of Section E2 above as project or contract experience. State of Maryland experience is neither required nor given more weight in proposal evaluations.

11) Proposed Facility

Identify Master Contractor's facilities, including address, from which any work will be performed.

12) State Assistance

Provide an estimate of expectation concerning participation by State personnel.

13) Confidentiality

A Master Contractor should give specific attention to the identification of those portions of its proposal that it considers confidential, proprietary commercial information or trade secrets, and provide justification why such materials, upon request, should not be disclosed by the State under the Public Information Act, Title 10, Subtitle 6, of the State Government Article of the Annotated Code of Maryland. Contractors are advised that, upon request for this information from a third party, the TO Procurement Officer will be required to make an independent determination regarding whether the information may be disclosed.

3.2.2 **Financial Response**

- A description of any assumptions on which the Master Contractor's Financial Proposal is based (Assumptions shall not constitute conditions, contingencies, or exceptions to the price proposal);
- Attachment 1 Completed Financial Proposal with all rates fully loaded.

SECTION 4 – TASK ORDER AWARD PROCESS

4.1 OVERVIEW

The TO Contractor will be selected from among all eligible Master Contractors within the appropriate functional area responding to the CATS II TORFP. In making the TOA award determination, the TO Requesting Agency will consider all information submitted in accordance with Section 3.

4.2 TECHNICAL PROPOSAL EVALUATION CRITERIA

The following are technical criteria for evaluating a TO Proposal in descending order of importance.

It is the intent of the State of Maryland to select a offeror that provides the best value for this project. The evaluation criteria shall include the following items listed below in order of importance:

- Technical Approach to Project including Sensor Utilized and Production Techniques for aerial photography, ground control, aerial triangulation, and orthophoto production phases of the project
- Project Management Plan and Reporting Mechanisms
- Quality Assurance and Quality Control Plans and Approach to this Project
- Key Personnel & Past Performance
- Proposed Costs
- Proposed Schedule

4.3 SELECTION PROCEDURES

TO Proposals will be assessed throughout the evaluation process for compliance with the minimum personnel qualifications and quality of responses to the TORFP. TO Proposals deemed technically qualified will have their financial proposal considered. All others will be deemed not reasonably susceptible to award and will receive e-mail notice from the TO Procurement Officer of not being selected to perform the work.

Qualified TO Proposal financial responses will be reviewed and ranked from lowest to highest price proposed.

The most advantageous TO Proposal offer considering technical and financial submission shall be selected for the work assignment.

4.4 COMMENCEMENT OF WORK UNDER A TOA

Commencement of work in response to a TOA shall be initiated only upon issuance of a fully executed TOA, a Non-Disclosure Agreement (To Contractor), a Purchase Order, and by a Notice to Proceed authorized by the TO Procurement Officer. See Attachment 7 - Notice to Proceed (sample).

ATTACHMENT 1 – PRICE PROPOSAL

PRICE PROPOSAL FOR CATS II TORFP #060B1400054

Reference	Description (1"=200' ASPRS Class I Orthos / 0.5' GSD)	$/sq. mile	TOTAL (based on estimate of 6449 square miles of land area
2.15.2.1	Project Management: (Initiation, Planning, Project Workplan)	$	$
2.15.2.2	Ground Control: Surveying and Targeting	$	$
2.15.2.3	Aerial Photography (Multispectral) Acquisition and Processing	$	$
2.15.2.4	Aerial Triangulation	$	$
2.15..2.5	DEM: DEM Examination and Updates Where Necessary to a DEM standard for Orthorectification	$	$
2.15.2.6	Digital Ortho Production	$	$
2.15..2.6	Pilot Area Production of Color Orthophotography	$	$
2.15.2.6	Pilot Area Production of Compressed and Meters Deliveries	$	$
2.15.2.1	Pilot Area QC and Pilot Review Meetings	$	$
2.15.2.6	State-wide Production of Color Orthophotography (Western Region)	$	$
2.15.2.6	Statewide Production of Compressed and Meters Deliveries	$	$
2.15.2.1	Production Area QC and Pilot Review Meetings	$	$
2.13	Technical Assistance (Ad-hoc to be defined tasks - up to 100 hours)	$	$
	TOTAL Evaluated Price – Primary State products	**$**	**$**
	Optional Imagery Buy-ups		
2.5.4.	100’ Scale ASPRS Class I/0.25’ GSD (planned areas – see RFP section 3.4.5)	$	$
2.5.4.	100’ Scale ASPRS Class I/0.25’ GSD (additional areas)	$	NA
2.5.4.	Near True Orthos 200’ Scale ASPRS Class I/0.25’ GSD (minimum 1 square miles – excludes Baltimore City)	$	NA
2.5.4.	Near True Orthos 200’ Scale ASPRS Class I/0.25’ GSD (minimum 1 square miles – for Baltimore City)	$	NA
2.5.4.	100’ Scale ASPRS Class I/0.25’ GSD	$	NA
2.5.4.	Near True Orthos 100’ Scale ASPRS Class I/0.25’ GSD (minimum 1 square mile – excludes Baltimore City)	$	NA
2.5.4.	Near True Orthos 100’ Scale ASPRS Class I/0.25’ GSD (minimum 1 square mile – for Baltimore City)	$	NA
2.1.2	Optional Island Coverage (James, Hooper, Barren Islands)	$	$
2.1.2	Optional Coverage coverage of Chesapeake Bay Area	$	$
2.4.2.5	Optional Geodetic Network Adjustment (enhanced use of County Control)	$/County	NA
	Optional LiDAR (services and products)		
2.10	Statewide LiDAR (1.4 meter point spacing)	$	$

2.10.8	Western Region LiDAR (1.4 meter point spacing)	$	$
2.10	County/ Regional LiDAR (min. 300 square miles)	$	NA
2.10	Breakline data capture	$	NA
	Oblique Imagery Option		
2.90	4” GSD (minimum 50 square mile)	$	
2.90	6” GSD (minimum 50 square mile)	$	
2.90	12” GSD (minimum 50 square mile)	$	
	Notes: Costs assume unlicensed, unlimited use. If a licensed product for oblique imagery is proposed it shall be specifically noted.		

Authorized Individual Name

Company Name

Title

Company Tax ID #

Note that the cost proposals will be evaluated based on the pricing for the primary products (orthoimagery products) required by the State. The total cost will be based on the estimated land area of 6,445 square miles as defined by the Census Bureau in its countywide tabulations. Vendors need to be advised that the actual project area will be larger to reflect the buffer areas.

SUBMIT AS A .PDF FILE WITH THE FINANCIAL RESPONSE

ATTACHMENT 2 – MINORITY BUSINESS ENTERPRISE FORMS

TO CONTRACTOR MINORITY BUSINESS ENTERPRISE REPORTING REQUIREMENTS

CATS II TORFP # 060B1400054

These instructions are meant to accompany the customized reporting forms sent to you by the TO Manager. If, after reading these instructions, you have additional questions or need further clarification, please contact the TO Manager immediately.

1. As the TO Contractor, you have entered into a TO Agreement with the State of Maryland. As such, your company/firm is responsible for successful completion of all deliverables under the contract, including your commitment to making a good faith effort to meet the MBE participation goal(s) established for TORFP. Part of that effort, as outlined in the TORFP, includes submission of monthly reports to the State regarding the previous month's MBE payment activity. Reporting forms D-5 (TO Contractor Paid/Unpaid MBE Invoice Report) and D-6 (Subcontractor Paid/Unpaid MBE Invoice Report) are attached for your use and convenience.

2. The TO Contractor must complete a separate Form D-5 for each MBE subcontractor for each month of the contract and submit one copy to each of the locations indicated at the bottom of the form. The report is due no later than the 15th of the month following the month that is being reported. For example, the report for January's activity is due no later than the 15th of February. With the approval of the TO Manager, the report may be submitted electronically. Note: Reports are required to be submitted each month, regardless of whether there was any MBE payment activity for the reporting month.

3. The TO Contractor is responsible for ensuring that each subcontractor receives a copy (e-copy of and/or hard copy) of Form D-6. The TO Contractor should make sure that the subcontractor receives all the information necessary to complete the form properly, i.e., all of the information located in the upper right corner of the form. It may be wise to customize Form D-6 (upper right corner of the form) for the subcontractor the same as the Form D-5 was customized by the TO Manager for the benefit of the TO Contractor. This will help to minimize any confusion for those who receive and review the reports.

4. It is the responsibility of the TO Contractor to make sure that all subcontractors submit reports no later than the 15th of each month, regardless of whether there was any MBE payment activity for the reporting month. Actual payment data is verified and entered into the State's financial management tracking system from the subcontractor's D-6 report only. Therefore, if the subcontractor(s) do not submit their D-6 payment reports, the TO Contractor cannot and will not be given credit for subcontractor payments, regardless of the TO Contractor's proper submission of Form D-5. The TO Manager will contact the TO Contractor if reports are not received each month from either the prime contractor or any of the identified subcontractors. The TO Contractor must promptly notify the TO Manager if, during the course of the contract, a new MBE subcontractor is utilized. Failure to comply with the MBE contract provisions and reporting requirements may result in sanctions, as provided by COMAR 21.11.03.13.

ATTACHMENT 2 – MINORITY BUSINESS ENTERPRISE FORMS

FORM D – 1

CERTIFIED MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT

This document shall be included with the submittal of the Offeror's TO Proposal. If the Offeror fails to submit this form with the TO Proposal, the TO Procurement Officer shall determine that the Offeror's TO Proposal is not reasonably susceptible of being selected for award.

In conjunction with the offer submitted in response to TORFP No. 060B1400054, I affirm the following:

1. I acknowledge the overall certified Minority Business Enterprise (MBE) participation goal of ____ percent and, if specified in the TORFP, sub-goals of ____ percent for MBEs classified as African American-owned and ____ percent for MBEs classified as women-owned. I have made a good faith effort to achieve this goal.

   OR

   After having made a good faith effort to achieve the MBE participation goal, I conclude that I am unable to achieve it. Instead, I intend to achieve an MBE goal of _____percent and request a waiver of the remainder of the goal. If I am selected as the apparent TO Agreement awardee, I will submit written waiver documentation that complies with COMAR 21.11.03.11 within 10 business days of receiving notification that our firm is the apparent low bidder or the apparent awardee.

2. I have identified the specific commitment of certified Minority Business Enterprises by completing and submitting an MBE Participation Schedule (Attachment 2 - Form D-2) with the proposal.

3. I acknowledge that the MBE subcontractors/suppliers listed in the MBE Participation Schedule will be used to accomplish the percentage of MBE participation that I intend to achieve.

4. I understand that if I am notified that I am the apparent TO Agreement awardee, I must submit the following documentation within 10 working days of receiving notice of the potential award or from the date of conditional award (per COMAR 21.11.03.10), whichever is earlier.

   (a) Outreach Efforts Compliance Statement (Attachment D-3)

   (b) Subcontractor Project Participation Statement (Attachment D-4)

   (c) MBE Waiver Documentation per COMAR 21.11.03.11 (if applicable)

   (d) Any other documentation required by the TO Procurement Officer to ascertain offeror's responsibility in connection with the certified MBE participation goal.

   If I am the apparent TO Agreement awardee, I acknowledge that if I fail to return each completed document within the required time, the TO Procurement Officer may determine that I am not responsible and therefore not eligible for TO Agreement award. If the TO Agreement has already been awarded, the award is voidable**.**

5. In the solicitation of subcontract quotations or offers, MBE subcontractors were provided not less than the same information and amount of time to respond as were non-MBE subcontractors.

I solemnly affirm under the penalties of perjury that the contents of this paper are true to the best of my knowledge, information, and belief.

_____	_____
Offeror Name	Signature of Affiant
_____	_____
Address	Printed Name, Title
_____	
_____	
_____	
_____	
Date	

SUBMIT AS A .PDF FILE WITH TO RESPONSE

FORM D – 2

MINORITY BUSINESS ENTERPRISE PARTICIPATION SCHEDULE

This document shall be included with the submittal of the TO Proposal. If the Offeror fails to submit this form with the TO Proposal, the TO Procurement Officer shall determine that the TO Proposal is not reasonably susceptible of being selected for award.

TO Prime Contractor (Firm Name, Address, Phone)	Task Order Description
Task Order Agreement Number 060B1400054	
List Information For Each Certified MBE Subcontractor On This Project	
Minority Firm Name	MBE Certification Number
Work To Be Performed/SIC	
Percentage of Total Contract	
Minority Firm Name	MBE Certification Number
Work To Be Performed/SIC	
Percentage of Total Contract	
Minority Firm Name	MBE Certification Number
Work To Be Performed/SIC	
Percentage of Total Contract	

USE ATTACHMENT D-2 CONTINUATION PAGE AS NEEDED

SUMMARY

TOTAL MBE PARTICIPATION: _____ %
TOTAL WOMAN-OWNED MBE PARTICIPATION: _____ %
TOTAL AFRICAN AMERICAN-OWNED MBE PARTICIPATION: _____ %

Document Prepared By: (please print or type)

Name:_____ Title:_____

SUBMIT AS A .PDF FILE WITH TO RESPONSE

ATTACHMENT 2 – MINORITY BUSINESS ENTERPRISE FORMS

FORM D – 2

MINORITY BUSINESS ENTERPRISE PARTICIPATION SCHEDULE (CONTINUED)

List Information For Each Certified MBE Subcontractor On This Project	
Minority Firm Name	MBE Certification Number
Work To Be Performed/SIC	
Percentage of Total Contract	
Minority Firm Name	MBE Certification Number
Work To Be Performed/SIC	
Percentage of Total Contract	
Minority Firm Name	MBE Certification Number
Work To Be Performed/SIC	
Percentage of Total Contract	
Minority Firm Name	MBE Certification Number
Work To Be Performed/SIC	
Percentage of Total Contract	
Minority Firm Name	MBE Certification Number
Work To Be Performed/SIC	
Percentage of Total Contract	
Minority Firm Name	MBE Certification Number
Work To Be Performed/SIC	
Percentage of Total Contract	

SUBMIT AS A .PDF FILE WITH TO RESPONSE

ATTACHMENT 2 – MINORITY BUSINESS ENTERPRISE FORMS

FORM D – 3

OUTREACH EFFORTS COMPLIANCE STATEMENT

In conjunction with the bid or offer submitted in response to TORFP #060B1400054, I state the following:

1. Offeror identified opportunities to subcontract in these specific work categories:

2. Attached to this form are copies of written solicitations (with bidding instructions) used to solicit certified MBEs for these subcontract opportunities.

3. Offeror made the following attempts to contact personally the solicited MBEs:

4. ¨ Offeror assisted MBEs to fulfill or to seek waiver of bonding requirements.

   (DESCRIBE EFFORTS)

   ¨ This project does not involve bonding requirements.

5. ¨ Offeror did/did not attend the pre-proposal conference

   ¨ No pre-proposal conference was held.

_____ By: _____

Offeror Name Name

_____ _____

Address Title

_____

Date

SUBMIT WITHIN 10 WORKING DAYS OF RECEIVING NOTICE OF THE POTENTIAL AWARD

ATTACHMENT 2 – MINORITY BUSINESS ENTERPRISE FORMS

FORM D – 4

SUBCONTRACTOR PROJECT PARTICIPATION STATEMENT

SUBMIT ONE FORM FOR EACH CERTIFIED MBE LISTED IN THE MBE PARTICIPATION SCHEDULE

Provided that _____ is awarded the TO Agreement in
(Prime TO Contractor Name)
conjunction with TORFP No. 060B1400054, it and _____,
(Subcontractor Name)
MDOT Certification No. _____, intend to enter into a contract by which the subcontractor shall:

(Describe work to be performed by MBE):
_____

_____

_____

_____

_____

¨ No bonds are required of Subcontractor

¨ The following amount and type of bonds are required of Subcontractor:

By:	By:
_____	_____
Prime Contractor Signature	Subcontractor Signature
_____	_____
Name	Name
_____	_____
Title	Title
_____	_____
Date	Date

SUBMIT WITHIN 10 WORKING DAYS OF RECEIVING NOTICE OF THE POTENTIAL AWARD

ATTACHMENT 2 – MINORITY BUSINESS ENTERPRISE FORMS

FORM D – 5

MINORITY BUSINESS ENTERPRISE PARTICIPATION TO CONTRACTOR PAID/UNPAID INVOICE REPORT

Report #: _____ Reporting Period (Month/Year): _____ **Report is due by the 15th of the following month.**	CATS II TORFP # 060B1400054 Contracting Unit _____ Contract Amount_____ MBE Sub Contract Amt_____ Contract Begin Date_____ Contract End Date_____ Services Provided_____

Prime TO Contractor:	Contact Person:	
Address:		
City:	State:	ZIP:
Phone:	FAX:	
Subcontractor Name:	Contact Person:	
Phone:	FAX:	
Subcontractor Services Provided:		
List all unpaid invoices over 30 days old received from the MBE subcontractor named above: **1.** **2.** **3.** **Total Dollars Unpaid: $_____**		

**If more than one MBE subcontractor is used for this contract, please use separate forms.

Return one copy of this form to the following address:

Ken Miller, TO Manager 45 Calvert St., 4th Floor Annapolis, MD 21401 Ken.Miller@doit.state.md.us	Donna DiCerbo, Procurement Officer Department of Information Technology 301 W Preston Street, Room M-6B Baltimore, MD 21201 Donna.DiCerbo@doit.state.md.us

Signature:_____ Date:_____

SUBMIT AS REQUIRED IN TO CONTRACTOR MBE REPORTING REQUIREMENTS

ATTACHMENT 2 – MINORITY BUSINESS ENTERPRISE FORMS

FORM D – 6

MINORITY BUSINESS ENTERPRISE PARTICIPATION SUBCONTRACTOR PAID/UNPAID INVOICE REPORT

Report #: _____ Reporting Period (Month/Year): __/_____ **Report Due By the 15th of the following Month.**	CATS II TORFP # 060B1400054 Contracting Unit _____ Contract Amount_____ MBE Sub Contract Amt_____ Contract Begin Date_____ Contract End Date_____ Services Provided_____

MBE Subcontractor Name:		
MDOT Certification #:		
Contact Person:		
Address:		
City:	State:	ZIP:
Phone:	FAX:	
Subcontractor Services Provided:		

List all payments received from Prime TO Contractor during reporting period indicated above. **1.** **2.** **3.** **Total Dollars Paid: $_____**	**List dates and amounts of any unpaid invoices over 30 days old.** **1.** **2.** **3.** **Total Dollars Unpaid: $_____**

Prime TO Contractor: Contact Person:

Return one copy of this form to the following address:

Ken Miller, TO Manager 45 Calvert St., 4th Floor Annapolis, MD 21401 Ken.Miller@doit.state.md.us	Donna DiCerbo, Procurement Officer Department of Information Technology 301 W Preston Street, Room M-6B Baltimore, MD 21201 Donna.DiCerbo@doit.state.md.us

Signature:_____ Date:_____

Submit as required in TO Contractor MBE Reporting Requirements

CATS II TORFP# 060B1400054OF MASTER CONTRACT #060B9800035

This Task Order Agreement ("TO Agreement") is made this day of Month, 200X by and between Task Order Contractor (TO Contractor) and the STATE OF MARYLAND, TO Requesting Agency.

IN CONSIDERATION of the mutual premises and the covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Definitions. In this TO Agreement, the following words have the meanings indicated:
   a. "Agency" means the TO Requesting Agency, as identified in the CATS II TORFP # ADPICS PO.
   b. "CATS II TORFP" means the Task Order Request for Proposals # ADPICS PO, dated MONTH DAY, YEAR, including any addenda.
   c. "Master Contract" means the CATS II Master Contract between the Maryland Department of Information Technology and TO Contractor dated _____.
   d. "TO Procurement Officer" means TO Procurement Officer. The Agency may change the TO Procurement Officer at any time by written notice to the TO Contractor.
   e. "TO Agreement" means this signed TO Agreement between TO Requesting Agency and TO Contractor.
   f. "TO Contractor" means the CATS II Master Contractor awarded this TO Agreement, whose principal business address is _____.
   g. "TO Manager" means TO Manager of the Agency. The Agency may change the TO Manager at any time by written notice to the TO Contractor.
   h. "TO Proposal - Technical" means the TO Contractor's technical response to the CATS II TORFP dated date of TO Proposal – Technical.
   i. "TO Proposal – Financial" means the TO Contractor's financial response to the CATS II TORFP dated date of TO Proposal - Financial.
   j. "TO Proposal" collectively refers to the TO Proposal – Technical and TO Proposal – Financial.

2. Scope of Work

2.1 This TO Agreement incorporates all of the terms and conditions of the Master Contract and shall not in any way amend, conflict with or supercede the Master Contract.

2.2 The TO Contractor shall, in full satisfaction of the specific requirements of this TO Agreement, provide the services set forth in Section 2 of the CATS II TORFP. These services shall be provided in accordance with the Master Contract, this TO Agreement, and the following Exhibits, which are attached and incorporated herein by reference. If there is any conflict among the Master Contract, this TO Agreement, and these Exhibits, the terms of the Master Contract shall govern. If there is any conflict between this TO Agreement and any of these Exhibits, the following order of precedence shall determine the prevailing provision:
   a. The TO Agreement,
   b. Exhibit A – CATS II TORFP
   c. Exhibit B – TO Proposal-Technical

d. Exhibit C – TO Proposal-Financial

2.3 The TO Procurement Officer may, at any time, by written order, make changes in the work within the general scope of the TO Agreement. No other order, statement or conduct of the TO Procurement Officer or any other person shall be treated as a change or entitle the TO Contractor to an equitable adjustment under this Section. Except as otherwise provided in this TO Agreement, if any change under this Section causes an increase or decrease in the TO Contractor's cost of, or the time required for, the performance of any part of the work, whether or not changed by the order, an equitable adjustment in the TO Agreement price shall be made and the TO Agreement modified in writing accordingly. The TO Contractor must assert in writing its right to an adjustment under this Section within thirty (30) days of receipt of written change order and shall include a written statement setting forth the nature and cost of such claim. No claim by the TO Contractor shall be allowed if asserted after final payment under this TO Agreement. Failure to agree to an adjustment under this Section shall be a dispute under the Disputes clause of the Master Contract. Nothing in this Section shall excuse the TO Contractor from proceeding with the TO Agreement as changed.

3. Time for Performance

Unless terminated earlier as provided in the Master Contract, the TO Contractor shall provide the services described in the TO Proposal and in accordance with the CATS II TORFP on receipt of a Notice to Proceed from the TO Manager. The term of this TO Agreement is for a period of _____, commencing on the date of Notice to Proceed and terminating on Month Day, Year.

4. Consideration and Payment

4.1 The consideration to be paid the TO Contractor shall be done so in accordance with the CATS II TORFP and shall not exceed the total amount of the task order. Any work performed by the TO Contractor in excess of the not-to-exceed ceiling amount of the TO Agreement without the prior written approval of the TO Manager is at the TO Contractor's risk of non-payment.

4.2 Payments to the TO Contractor shall be made as outlined Section 2 of the CATS II TORFP, but no later than thirty (30) days after the Agency's receipt of an invoice for services provided by the TO Contractor, acceptance by the Agency of services provided by the TO Contractor, and pursuant to the conditions outlined in Section 4 of this Agreement.

4.3 Each invoice for services rendered must include the TO Contractor's Federal Tax Identification Number which is _____. Charges for late payment of invoices other than as prescribed by Title 15, Subtitle 1, of the State Finance and Procurement Article, Annotated Code of Maryland, as from time-to-time amended, are prohibited. Invoices must be submitted to the Agency TO Manager unless otherwise specified herein.

4.4 In addition to any other available remedies, if, in the opinion of the TO Procurement Officer, the TO Contractor fails to perform in a satisfactory and timely manner, the TO Procurement Officer may refuse or limit approval of any invoice for payment, and may cause payments to the TO Contractor to be reduced or withheld until such time as the TO Contractor meets performance standards as established by the TO Procurement Officer.

IN WITNESS THEREOF, the parties have executed this TO Agreement as of the date hereinabove set forth.

TO Contractor Name

_____ _____

By: Type or Print TO Contractor POC Date

Witness: _____

STATE OF MARYLAND, TO Requesting Agency

_____ _____

By: insert name, TO Procurement Officer Date

Witness: _____

ATTACHMENT 4 – CONFLICT OF INTEREST AFFIDAVIT AND DISCLOSURE

A) "Conflict of interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the State, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

B) "Person" has the meaning stated in COMAR 21.01.02.01B(64) and includes a bidder, Offeror, Contractor, offeror, or subcontractor or subofferor at any tier, and also includes an employee or agent of any of them if the employee or agent has or will have the authority to control or supervise all or a portion of the work for which a bid or offer is made.

C) The bidder or Offeror warrants that, except as disclosed in §D, below, there are no relevant facts or circumstances now giving rise or which could, in the future, give rise to a conflict of interest.

D) The following facts or circumstances give rise or could in the future give rise to a conflict of interest (explain in detail—attach additional sheets if necessary):

E) The bidder or Offeror agrees that if an actual or potential conflict of interest arises after the date of this affidavit, the bidder or Offeror shall immediately make a full disclosure in writing to the procurement officer of all relevant facts and circumstances. This disclosure shall include a description of actions which the bidder or Offeror has taken and proposes to take to avoid, mitigate, or neutralize the actual or potential conflict of interest. If the contract has been awarded and performance of the contract has begun, the Contractor shall continue performance until notified by the procurement officer of any contrary action to be taken.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date:_____ By:_____

(Authorized Representative and Affiant)

SUBMIT AS A .PDF FILE WITH TO RESPONSE

ATTACHMENT 5 – LABOR CLASSIFICATION PERSONNEL RESUME SUMMARY

INSTRUCTIONS:

1. Master Contractors must comply with all personnel requirements under the Master Contract RFP 060B9800035.

2. Only labor categories proposed in the Master Contractors Financial Proposal may be proposed under the CATS II TORFP process.

3. For each person proposed in any of the labor categories, complete one Labor Category Personnel Resume Summary to document how the proposed person meets each of the minimum requirements. This summary is required at the time of the interview.

   For example: If you propose John Smith, who is your subcontractor, and you believe he meets the requirements of the Group Facilitator, you will complete the top section of the form by entering John Smith's name and the subcontractor's company name. You will then complete the right side of the Group Facilitator form documenting how the individual meets each of the requirements. Where there is a time requirement such as three months experience, you must provide the dates from and to showing an amount of time that equals or exceeds mandatory time requirement; in this case, three months.

4. Each form also includes examples of duties to perform. The proposed person must be able to fulfill those duties.

5. For each subject matter expert, the State will identify the particular area of expertise and the Master Contractor shall provide proof the individual has qualifications within that area of expertise.

6. Additional information may be attached to each Labor Category Personnel Resume Summary that may assist a full and complete understanding of the individual being proposed.

ATTACHMENT 5 – LABOR CLASSIFICATION PERSONNEL RESUME SUMMARY (CONTINUED)

Proposed Individual's Name/Company:	How does the proposed individual meet each requirement?
LABOR CLASSIFICATION TITLE – (INSERT LABOR CATEGORY NAME)	
Education: (Insert the education description from the CATS II RFP from Section 2.10 for the applicable labor category.)	
Experience: (Insert the experience description from the CATS II RFP from Section 2.10 for the applicable labor category.)	
Duties: (Insert the duties description from the CATS II RFP from Section 2.10 for the applicable labor category.)	

The information provided on this form for this labor class is true and correct to the best of my knowledge:

Contractor's Contract Administrator:

_____ _____

Signature Date

Proposed Individual:

_____ _____

Signature Date

SUBMIT WITH TECHNICAL PROPOSAL

SIGNATURE REQUIRED AT THE TIME OF THE INTERVIEW

ATTACHMENT 6 – NOTICE TO PROCEED

Month Day, Year

TO Contractor Name

TO Contractor Mailing Address

Re: CATS II Task Order Agreement # 060B1400054

Dear TO Contractor Contact:

This letter is your official Notice to Proceed as of Month Day, Year, for the above-referenced Task Order Agreement. TO Manager of the TO Requesting Agency will serve as your contact person on this Task Order. TO Manager can be reached at telephone # and email address.

Enclosed is an original, fully executed Task Order Agreement and purchase order.

Sincerely,

TO Procurement Officer

Task Order Procurement Officer

Enclosures (2)

cc: TO Manager

Procurement Liaison Office, Department of Information Technology

Project Management Office, Department of Information Technology

ATTACHMENT 7 – AGENCY RECEIPT OF DELIVERABLE FORM

I acknowledge receipt of the following:

TORFP Title: Project Name for TORFP

TO Agreement Number: #ADPICS PO

Title of Deliverable: _____

TORFP Reference Section # _____

Deliverable Reference ID # _____

Name of TO Manager: TO Manager

_____ _____

TO Manager Signature Date Signed

Name of TO Contractor's Project Manager: _____

_____ _____

TO Contractor's Project Manager Signature Date Signed

Submit as required in Section 2.13.1 of the TORFP.

ATTACHMENT 8 – AGENCY ACCEPTANCE OF DELIVERABLE FORM

Agency Name: TO Requesting Agency

TORFP Title: TORFP Project Name

TO Manager: TO Manager and Phone Number

To:

The following deliverable, as required by TO Agreement # 060B1400054, has been received and reviewed in accordance with the TORFP.

Title of deliverable: _____

TORFP Contract Reference Number: Section # _____

Deliverable Reference ID # _____

This deliverable:

☐ Is accepted as delivered.

☐ Is rejected for the reason(s) indicated below.

REASON(S) FOR REJECTING DELIVERABLE:

OTHER COMMENTS:

_____ _____

TO Manager Signature Date Signed

ISSUED BY THE TO MANAGER AS REQUIRED IN SECTION 2.13.1 OF THE TORFP.

ATTACHMENT 9 – NON-DISCLOSURE AGREEMENT (OFFEROR)

This Non- Disclosure Agreement (the "Agreement") is made this ___ day of _____ 200_, by and between _____ (hereinafter referred to as "the OFFEROR ") and the State of Maryland (hereinafter referred to as " the State").

OFFEROR warrants and represents that it intends to submit a TO Proposal in response to CATS II TORFP # 060B1400054 for TORFP Project Name. In order for the OFFEROR to submit a TO Proposal, it will be necessary for the State to provide the OFFEROR with access to certain confidential information including, but not limited, to _____. All such information provided by the State shall be considered Confidential Information regardless of the form, format, or media upon which or in which such information is contained or provided, regardless of whether it is oral, written, electronic, or any other form, and regardless of whether the information is marked as "Confidential Information". As a condition for its receipt and access to the Confidential Information described above, the OFFEROR agrees as follows:

1. OFFEROR will not copy, disclose, publish, release, transfer, disseminate or use for any purpose in any form any Confidential Information received under Section 1.7, except in connection with the preparation of its TO Proposal.
2. Each employee or agent of the OFFEROR who receives or has access to the Confidential Information shall execute a copy of this Agreement and the OFFEROR shall provide originals of such executed Agreements to the State. Each employee or agent of the OFFEROR who signs this Agreement shall be subject to the same terms, conditions, requirements and liabilities set forth herein that are applicable to the OFFEROR.
3. OFFEROR shall return the Confidential Information to the State within five business days of the State's Notice of recommended award. If the OFFEROR does not submit a Proposal, the OFFEROR shall return the Confidential Information to TO Procurement Officer, TO Requesting Agency on or before the due date for Proposals.
4. OFFEROR acknowledges that the disclosure of the Confidential Information may cause irreparable harm to the State and agrees that the State may obtain an injunction to prevent the disclosure, copying, or other impermissible use of the Confidential Information. The State's rights and remedies hereunder are cumulative and the State expressly reserves any and all rights, remedies, claims and actions that it may have now or in the future to protect the Confidential Information and/or to seek damages for the OFFEROR'S failure to comply with the requirements of this Agreement. The OFFEROR consents to personal jurisdiction in the Maryland State Courts.
5. In the event the State suffers any losses, damages, liabilities, expenses, or costs (including, by way of example only, attorneys' fees and disbursements) that are attributable, in whole or in part to any failure by the OFFEROR or any employee or agent of the OFFEROR to comply with the requirements of this Agreement, OFFEROR and such employees and agents of OFFEROR shall hold harmless and indemnify the State from and against any such losses, damages, liabilities, expenses, and/or costs.
6. This Agreement shall be governed by the laws of the State of Maryland.
7. OFFEROR acknowledges that pursuant to Section 11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland, a person may not willfully make a false or fraudulent statement or representation of a material fact in connection with a procurement contract. Persons making such statements are guilty of a felony and on conviction subject to a fine of not more than $20,000 and/or imprisonment not exceeding 5 years or both. OFFEROR further acknowledges that this Agreement is a statement made in connection with a procurement contract.
8. The individual signing below warrants and represents that they are fully authorized to bind the OFFEROR to the terms and conditions specified in this Agreement. If signed below by an individual employee or agent of the OFFEROR under Section 2 of this Agreement, such individual acknowledges that a failure to comply with the requirements specified in this Agreement may result in personal liability.

OFFEROR: _____ BY: _____

NAME: _____ TITLE: _____

ADDRESS:_____

SUBMIT AS REQUIRED IN SECTION 1.7 OF THE TORFP

ATTACHMENT 10 – NON-DISCLOSURE AGREEMENT (TO CONTRACTOR)

THIS NON-DISCLOSURE AGREEMENT ("Agreement") is made as of this ___ day of _____, 200__, by and between the State of Maryland ("the State"), acting by and through its TO Requesting Agency (the "Department"), and _____ ("TO Contractor"), a corporation with its principal business office located at _____ and its principal office in Maryland located at _____.

RECITALS

WHEREAS, the TO Contractor has been awarded a Task Order Agreement (the "TO Agreement") for TORFP Title TORFP No. 060B1400054dated _____, (the "TORFP) issued under the Consulting and Technical Services procurement issued by the Department, Project Number 060B9800035; and

WHEREAS, in order for the TO Contractor to perform the work required under the TO Agreement, it will be necessary for the State to provide the TO Contractor and the TO Contractor's employees and agents (collectively the "TO Contractor's Personnel") with access to certain confidential information regarding _____ (the "Confidential Information").

NOW, THEREFORE, in consideration of being given access to the Confidential Information in connection with the TORFP and the TO Agreement, and for other good and valuable consideration, the receipt and sufficiency of which the parties acknowledge the parties do hereby agree as follows:

1. Confidential Information means any and all information provided by or made available by the State to the TO Contractor in connection with the TO Agreement, regardless of the form, format, or media on or in which the Confidential Information is provided and regardless of whether any such Confidential Information is marked as such. Confidential Information includes, by way of example only, information that the TO Contractor views, takes notes from, copies (if the State agrees in writing to permit copying), possesses or is otherwise provided access to and use of by the State in relation to the TO Agreement.

2. TO Contractor shall not, without the State's prior written consent, copy, disclose, publish, release, transfer, disseminate, use, or allow access for any purpose or in any form, any Confidential Information provided by the State except for the sole and exclusive purpose of performing under the TO Agreement. TO Contractor shall limit access to the Confidential Information to the TO Contractor's Personnel who have a demonstrable need to know such Confidential Information in order to perform under the TO Agreement and who have agreed in writing to be bound by the disclosure and use limitations pertaining to the Confidential Information. The names of the TO Contractor's Personnel are attached hereto and made a part hereof as Exhibit A. Each individual whose name appears on Exhibit A shall execute a copy of this Agreement and thereby be subject to the terms and conditions of this Agreement to the same extent as the TO Contractor. TO Contractor shall update Exhibit A by adding additional names as needed, from time to time.

3. If the TO Contractor intends to disseminate any portion of the Confidential Information to non-employee agents who are assisting in the TO Contractor's performance of the TORFP or who will otherwise have a role in performing any aspect of the TORFP, the TO Contractor shall first obtain the written consent of the State to any such dissemination. The State may grant, deny, or condition any such consent, as it may deem appropriate in its sole and absolute subjective discretion.

4. TO Contractor hereby agrees to hold the Confidential Information in trust and in strictest confidence, to adopt or establish operating procedures and physical security measures, and to take all other measures necessary to protect the Confidential Information from inadvertent release or disclosure to unauthorized third parties and to prevent all or any portion of the Confidential Information from falling into the public domain or into the possession of persons not bound to maintain the confidentiality of the Confidential Information.

5. TO Contractor shall promptly advise the State in writing if it learns of any unauthorized use, misappropriation, or disclosure of the Confidential Information by any of the TO Contractor's Personnel or the TO Contractor's former Personnel. TO Contractor shall, at its own expense, cooperate with the State in seeking injunctive or other equitable relief against any such person(s).

6. TO Contractor shall, at its own expense, return to the Department, all copies of the Confidential Information in its care, custody, control or possession upon request of the Department or on termination of the TO Agreement.

7. A breach of this Agreement by the TO Contractor or by the TO Contractor's Personnel shall constitute a breach of the TO Agreement between the TO Contractor and the State.

8. TO Contractor acknowledges that any failure by the TO Contractor or the TO Contractor's Personnel to abide by the

terms and conditions of use of the Confidential Information may cause irreparable harm to the State and that monetary damages may be inadequate to compensate the State for such breach. Accordingly, the TO Contractor agrees that the State may obtain an injunction to prevent the disclosure, copying or improper use of the Confidential Information. The TO Contractor consents to personal jurisdiction in the Maryland State Courts. The State's rights and remedies hereunder are cumulative and the State expressly reserves any and all rights, remedies, claims and actions that it may have now or in the future to protect the Confidential Information and/or to seek damages from the TO Contractor and the TO Contractor's Personnel for a failure to comply with the requirements of this Agreement. In the event the State suffers any losses, damages, liabilities, expenses, or costs (including, by way of example only, attorneys' fees and disbursements) that are attributable, in whole or in part to any failure by the TO Contractor or any of the TO Contractor's Personnel to comply with the requirements of this Agreement, the TO Contractor shall hold harmless and indemnify the State from and against any such losses, damages, liabilities, expenses, and/or costs.

9. TO Contractor and each of the TO Contractor's Personnel who receive or have access to any Confidential Information shall execute a copy of an agreement substantially similar to this Agreement and the TO Contractor shall provide originals of such executed Agreements to the State.

10. The parties further agree that:

    a. This Agreement shall be governed by the laws of the State of Maryland;

    b. The rights and obligations of the TO Contractor under this Agreement may not be assigned or delegated, by operation of law or otherwise, without the prior written consent of the State;

    c. The State makes no representations or warranties as to the accuracy or completeness of any Confidential Information;

    d. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement;

    e. Signatures exchanged by facsimile are effective for all purposes hereunder to the same extent as original signatures; and

    f. The Recitals are not merely prefatory but are an integral part hereof.

TO Contractor/TO Contractor's Personnel:	TO Requesting Agency:
Name:_____	Name: _____
Title:_____	Title:_____
Date: _____	Date: _____

SUBMIT AS REQUIRED IN SECTION 1.7 OF THE TORFP

ATTACHMENT 11 – TO CONTRACTOR SELF-REPORTING CHECKLIST

The purpose of this checklist is for CATS II Master Contractors to self-report on adherence to procedures for task orders (TO) awarded under the CATS II master contract. Requirements for TO management can be found in the CATS II master contract RFP and at the TORFP level. The Master Contractor is requested to complete and return this form by the ***Checklist Due Date*** *below. Master Contractors may attach supporting documentation as needed. Please send the completed checklist and direct any related questions to contractoversight@doit.state.md.us with the TO number in the subject line.*

Master Contractor:	
Master Contractor Contact / Phone:	
Procuring State Agency Name:	
TO Title:	
TO Number:	
TO Type (Fixed Price, T&M, or Both):	
Checklist Issue Date:	
Checklist Due Date:	

Section 1 – Task Orders with Invoices Linked to Deliverables
A) Was the original TORFP (Task Order Request for Proposals) structured to link invoice payments to distinct deliverables with specific acceptance criteria? **Yes** ☐ **No** ☐ **(If no, skip to Section 2.)**
B) Do TO invoices match corresponding deliverable prices shown in the accepted Financial Proposal? **Yes** ☐ **No** ☐ **(If no, explain why)** _____
C) Is the deliverable acceptance process being adhered to as defined in the TORFP? **Yes** ☐ **No** ☐ **(If no, explain why)** _____
Section 2 – Task Orders with Invoices Linked to Time, Labor Rates and Materials
A) If the TO involves material costs, are material costs passed to the agency without markup by the Master Contractor? **Yes** ☐ **No** ☐ **(If no, explain why)** _____
B) Are labor rates the same or less than the rates proposed in the accepted Financial Proposal? **Yes** ☐ **No** ☐ **(If no, explain why)** _____
C) Is the Master Contractor providing timesheets or other appropriate documentation to support invoices? **Yes** ☐ **No** ☐ **(If no, explain why)** _____
Section 3 – Substitution of Personnel

A) Has there been any substitution of personnel?

Yes ☐ **No** ☐ **(If no, skip to Section 4.)**

B) Did the Master Contractor request each personnel substitution in writing?

Yes ☐ **No** ☐ **(If no, explain why)** _____

C) Does each accepted substitution possess equivalent or better education, experience and qualifications than incumbent personnel?

Yes ☐ **No** ☐ **(If no, explain why)** _____

D) Was the substitute approved by the agency in writing?

Yes ☐ **No** ☐ **(If no, explain why)** _____

Section 4 – MBE Participation

A) What is the MBE goal as a percentage of the TO value? **(If there is no MBE goal, skip to Section 5)**

%

B) Are MBE reports D-5 and D-6 submitted monthly?

Yes ☐ **No** ☐ **(If no, explain why)** _____

C) What is the actual MBE percentage to date? (divide the dollar amount paid to date to the MBE by the total amount paid to date on the TO)

%

(Example - $3,000 was paid to date to the MBE sub-contractor; $10,000 was paid to date on the TO; the MBE percentage is 30% (3,000 ÷ 10,000 = 0.30))

D) Is this consistent with the planned MBE percentage at this stage of the project?

Yes ☐ **No** ☐ **(If no, explain why)** _____

E) Has the Master Contractor expressed difficulty with meeting the MBE goal?

Yes ☐ **No** ☐

(If yes, explain the circumstances and any planned corrective actions)

_____

Section 5 – TO Change Management

A) Is there a written change management procedure applicable to this TO?

Yes ☐ **No** ☐ **(If no, explain why)** _____

B) Does the change management procedure include the following?

Yes ☐ **No** ☐ Sections for change description, justification, and sign-off

Yes ☐ **No** ☐ Sections for impact on cost, scope, schedule, risk and quality (i.e., the impact of change on satisfying TO requirements)

Yes ☐ **No** ☐ A formal group charged with reviewing / approving / declining changes (e.g., change control board, steering committee, or management team)

C) Have any change orders been executed?

Yes ☐ **No** ☐

(If yes, explain expected or actual impact on TO cost, scope, schedule, risk and quality)

_____

D) Is the change management procedure being followed?

Yes ☐ **No** ☐ **(If no, explain why)** _____

ATTACHMENT 12 – LIVING WAGE AFFIDAVIT OF AGREEMENT

Contract No. _____

Name of Contractor _____

Address_____

City_____ State_____ Zip Code_____

If the Contract is Exempt from the Living Wage Law

The Undersigned, being an authorized representative of the above named Contractor, hereby affirms that the Contract is exempt from Maryland's Living Wage Law for the following reasons: (check all that apply)

__ Bidder/Offeror is a nonprofit organization

__ Bidder/Offeror is a public service company

__ Bidder/Offeror employs 10 or fewer employees and the proposed contract value is less than $500,000

__ Bidder/Offeror employs more than 10 employees and the proposed contract value is less than $100,000

If the Contract is a Living Wage Contract

A. The Undersigned, being an authorized representative of the above named Contractor, hereby affirms our commitment to comply with Title 18, State Finance and Procurement Article, Annotated Code of Maryland and, if required, to submit all payroll reports to the Commissioner of Labor and Industry with regard to the above stated contract. The Bidder/Offeror agrees to pay covered employees who are subject to living wage at least the living wage rate in effect at the time service is provided for hours spent on State contract activities, and to ensure that its Subcontractors who are not exempt also pay the required living wage rate to their covered employees who are subject to the living wage for hours spent on a State contract for services. The Contractor agrees to comply with, and ensure its Subcontractors comply with, the rate requirements during the initial term of the contract and all subsequent renewal periods, including any increases in the wage rate established by the Commissioner of Labor and Industry, automatically upon the effective date of the revised wage rate.

B. _____(initial here if applicable) The Bidder/Offeror affirms it has no covered employees for the following reasons (check all that apply):

__ All employee(s) proposed to work on the State contract will spend less than one-half of the employee's time during every work week on the State contract;

__ All employee(s) proposed to work on the State contract will be 17 years of age or younger during the duration of the State contract; or

__ All employee(s) proposed to work on the State contract will work less than 13 consecutive weeks on the State contract.

The Commissioner of Labor and Industry reserves the right to request payroll records and other data that the Commissioner deems sufficient to confirm these affirmations at any time.

Name of Authorized Representative: _____

Signature of Authorized Representative: _____

Date: _____ Title: _____

Witness Name (Typed or Printed): _____
Witness Signature & Date: _____

EXHIBIT A

TO CONTRACTOR'S EMPLOYEES AND AGENTS WHO WILL BE GIVEN ACCESS TO CONFIDENTIAL INFORMATION

Printed Name and Address of Employee or Agent	Signature	Date

NOT APPLICABLE