

SECTION C – DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 Background

C.1.1 ABOUT THE NATIONAL MUSEUM OF NATURAL HISTORY / The National Museum of Natural History (NMNH) is part of the Smithsonian Institution, the world's preeminent museum and research complex. The Museum is dedicated to inspiring curiosity, discovery, and learning about the natural world through its unparalleled research, collections, exhibitions, and education outreach programs. Opened in 1910, the green-domed museum on the National Mall was among the first Smithsonian building constructed exclusively to house the national collections and research facilities.

C.1.2 ABOUT THE “OUTBREAK” Exhibition / “Outbreak” is an exciting new exhibition that will open March 2018 in the Smithsonian's National Museum of Natural History in Washington DC that focuses on zoonotic infectious diseases and the One Health approach to understanding how they occur. The Museum is partnering with a number of partners within the Smithsonian and outside organizations who are leaders in this field.

The exhibition will highlight how Smithsonian biologists, veterinarians, and anthropologists, work with other professionals to respond to outbreaks such as Ebola, MERS, influenza, SARS, and HIV... and maybe even predict where the next infectious pathogens will emerge. The development of this exhibition provides many opportunities to create fruitful partnerships with institutions and organizations that focus their efforts on confronting various aspects of researching, predicting, preventing, and responding to emerging infectious diseases globally.

The subject matter for this exhibition is microscopic, although the effects from infectious disease are real and tangible. There will be a number of iconic NMNH specimens along with personal objects safely tucked into areas of the exhibition. However, the use of media will help to reinforce the following:

- One Health – animal, environment, and human connections across the globe
- Use of global technologies such as internet, smartphones, and social media to keep professionals connected at all times.
- Participatory nature of the detective role endowed on visitors

Tone is hugely important to this exhibition. Visitors could be easily scared by this topic so we rely on the text, graphics, and multimedia to convey serious stories about researchers, the diseases they study, and those affected by the outbreaks. The “how-to's” and basic scientific knowledge can have a lighter tone.

C.2 Scope of Work

C.2.1

The selected Contractor shall provide all professional, technical, and non-personal services necessary to lead the development of exhibit media and interactives outlined in the attached Media Treatment (attached hereto and incorporated herein as Attachment J.4) document in conjunction with NMNH staff, taking them from conceptual approaches to well-defined prototypes ready to be developed and delivered as exhibition-ready products by a selected producer.

The Contractor shall be responsible for determining and proposing the ideal creative and technical approaches for all media and interactivity within the exhibit based upon the known scope requirements, as well as known limitations of cost, space, durability, available content, intent, IT regulations, and infrastructure requirements. The contractor will work with appropriate Smithsonian staff to identify and conform proposed solutions to each of these requirements.

The Contractor must work with NMNH to identify hardware options, required infrastructure, interactive functionality, game mechanics, and refine content selection for each media and interactive piece. The Contractor will also be responsible for prototyping and testing media and interactivity to determine usability, visitor interest and comprehension, and overall effectiveness of proposed approaches. The Contractor shall deliver deliverables at specific milestones of the exhibit development process, leading to a final exhibit media package to solicit vendor bids for production.

There may be an opportunity to make the video and interactives available on the web for reproduction by venues as part of a traveling/licensed exhibition version. To allow for maximum flexibility of usage in the future, the Contractor should work with NMNH to program the media for use both in the Exhibition and beyond.

The goal of the Contractor is to recommend effective media and interactive solutions, prototype and deliver products outlined in Section C.2.3 that can then be produced by selected media and interactive producer(s).

C.2.2 SCHEDULE

As part of its proposal, Contractor shall prepare and submit a detailed task and resource, Gant bar schedule for the Services which shall include design and deliverable milestones; critical path activities and resources; submission dates; projected dates for cost estimates and design reviews; Smithsonian review periods; Contractor review periods; meetings specified herein; and task dependencies for submissions and meetings (the “Media Schedule”). Unless otherwise agreed to by the parties in writing, the Media Schedule must be coordinated with the Exhibit Schedule listed below, and include sufficient time to share information with subcontractors. Contractor shall revise the Media Schedule to reflect Smithsonian comments, track the Media Schedule, update the Media Schedule as needed to remain current, but no less than monthly and provide the Media Schedule to Smithsonian upon request. The Contractor shall immediately notify the COTR and the Smithsonian Contracting Officer of any problem, unexpected occurrence, or delay in performing the Services.

PROPOSED Media Schedule

Phase I Deliverable – March 2017

Phase II Deliverable – May 2017

Production – January 2018

Exhibition Installation – February 2018

Exhibit Schedule (For Reference Only)

Exhibition 65% is submitted for approval mid-January 2017

Exhibition 95% is submitted for approval end of March 2017
Exhibition Fabrication starts August 2017
Exhibition installation starts late February 2018
Exhibition opens March 2018

Contractor shall work with NMNH to determine appropriate schedule to design and produce all multimedia pieces along with coordinating with exhibition design and detailing.

C.2.3 DELIVERABLES

Notwithstanding all other tasks set forth in this present *Section C*, under the Terms and Conditions of the finalized Contract the selected Contractor shall be responsible for the production of “Deliverables” tied to the following elements as outlined below:

C.2.3.1 General. For meetings, the Contractor will send a proposed agenda for review 3 business days in advance of meetings. Minutes of all team meetings and conference calls the Contractor is a part of, to be delivered within 3 business days. Some meetings will be in person at NMNH, especially for kick-off, team workshops, and deliverable reviews.

C.2.3.1 Start of the Project. Schedule and attend a brainstorming kick-off session with the Exhibition Core Team and then provide a detailed baseline schedule for development and production.

C.2.3.2 Phase I of Media Development.

C.2.3.2.1 Preliminary media narratives, storyboards, and wireframes. Contractor will provide media writing services;

C.2.3.2.2 Preliminary style guide, sample references for graphics, illustration, and animation style options;

C.2.3.2.3 Identify accessibility opportunities and alternatives for all media;

C.2.3.2.6 Propose a schedule for media development and track progress, keeping in mind time for rapid visitor testing for complex topics; and

C.2.3.2.7 Estimate production costs in a line item budget for each media piece.

C.2.3.3 Phase II Media Development.

C.2.3.3.1 Final storyboards, wireframes, and draft scripts for all videos and interactives;

C.2.3.3.2 Deliver final hardware and infrastructure specifications as narrative and budget documents. These should include identifying requirements of budget, quantities, sizes, and required infrastructure for both hardware used within the exhibit, as well as infrastructure needed to support the media and interactives for the life of the exhibit. Hardware includes, but is not limited to: video projectors, display screens, computers, touchscreens, data ports and network control equipment, cameras, servers, databases, development frameworks, content management systems, cabling, audio equipment, and usage tracking solutions;

C.2.3.3.3 Finalized style guide with full size samples of typographic style, samples of illustration/animation style, and graphic aesthetic. In consultation with NMNH designers and NMNH style guide;

C.2.3.3.4 Technical functional requirements specifications for physical interactions and media;

C.2.3.3.5 Final specifications (numbers, size and estimated costs) of information technology hardware and software to support media and technology [or digital outreach] capabilities, including, but not limited to: servers, databases, development frameworks, content management systems, display screens, touchscreens, image/animation licensing; and

C.2.3.3.6 Testing procedures, processes and technologies plan, along with plans for how to track visitor engagement and usage of media and interactives, integrated with evaluation plan for Exhibition overall.

C.2.4 **OPTION**

The following Services may be added to the resultant Contract by way of formal Modification pursuant to *Section F.3* below. If requested by the SI, the pricing for the referenced Services shall be negotiated by the parties.

C.2.4.1 Production Phase

C.2.4.1.1 Confirm all scripts and image selections;

C.2.4.1.2 Rough and final cuts of all videos. This includes any original filming required for on-screen speakers if on video or audio recording if off-screen presentation;

C.2.4.1.3 Alpha and beta testing both at producer's facility and at NMNH with visitors. Producer will be at NMNH to help setup, evaluation, and break down testing materials;

C.2.4.1.4 Confirmation of final hardware;

C.2.4.1.5 Secure hardware for prototyping;

C.2.4.1.6 Develop a technical coordination plan in collaboration with NMNH and Fabricator;

C.2.4.1.7 Complete programming and functionality/stability testing of all interactives;

C.2.4.1.8 Procure all rights and files for all images and video;

C.2.4.1.9 Sample hardware cutsheets;

C.2.4.1.10 An area-by-area description of the functional media requirements for each identified system, either in narrative or "bullet-point" outline form;

C.2.4.1.11 A complete bill of materials for each system, including manufacturers, model numbers, colors and accessories for all components required for a complete and functional system;

C.2.4.1.12 Deliver a final production timeline in Gant chart format detailing milestones and delivery dates for production phase;

C.2.4.1.13 All visual resources shall be of a resolution to match the output of the selected video playback devices and shall adhere to the Smithsonian Digitization Program Office guidelines. Reformat all content resources to conform to technical requirements as outlined in the technical requirements document;

C.2.4.1.14 Narrative report detailing levels, means, methods, and staffing requirements to update or change multimedia elements after the Exhibition opens;

C.2.4.1.15 Setup and test necessary support infrastructure, which may include APIs, content management systems, web content aggregation system, usage tracking, databases, and system monitoring.

C.2.4.2 Installation Phase

C.2.4.2.1 Revisions to interactive software, videos as necessary;

C.2.4.2.2 Fulfill all sign-offs by NMNH on final interactive software, videos before installation;

C.2.4.2.3 Work with Fabrication contractor's Multimedia Integrators to install, test, and finalize all video and interactives. All media must be running without error for one month before NMNH gives approval;

C.2.4.2.4 Provide all editable layered media files in their original working format (ie for videos: Adobe Premier, Final Cut Pro, Adobe After Effects, Cinema 4d, Apple Motion) and packaged with their original assets (images, fonts, graphic elements, video clips);

C.2.4.2.5 Deliver all final files that NMNH has approved of three (3) weeks after the close of the contract. This includes any videos, graphics, code, licenses, data and/or software that were altered on-site due to troubleshooting and punchlist work. All media can be transferred via DropBox or similar FTP transfer site;

C.2.4.2.6 Post-Opening - final punchlist items and warranty support.

C.2.5 DEVELOPMENT AND DESIGN CONSIDERATIONS

C.2.5.1 *Team Consultation.* The responsibility for Exhibition development and intellectual content lies with the curatorial, exhibits and education staff of the Museum, but the project is seen as a collaboration with the Contractor; the visual presentation lies with the Contractor, subject to Smithsonian Institution approval. The Contractor will work in a collaborative team environment with Museum staff where conceptualization and problem-solving through constructive criticism and compromise is encouraged. The Contractor may be asked to consult with Museum resources such as, but not limited to: the Exhibitions Department; the Office for Facilities Management and Reliability for how media programs and hardware interact with existing building infrastructure; the Office of the Chief Information Officer for network integration; and Smithsonian Facilities. The Contractor will also need to work with exhibition partners who provide expertise and specific programs that will be integrated into the proposed media along with any other contractors the Museum hires for this project such as a Fabricator.

C.2.5.2 *Accessibility/Universal Design.* The design shall include accessibility and universal design as part of its core design criteria, in order to provide a rich interpretive experience for all visitors regardless of physical differences or cognitive capabilities. To this end, the design of the Exhibition must meet or exceed the requirements of the federal Americans with Disabilities Act ("ADA"), as well as those of the *Smithsonian Guidelines for Accessible Exhibition Design* (attached hereto and incorporated herein as Attachment J.5), *Smithsonian Standards and Guidelines on Accessibility* and Smithsonian Directive 215 (SD-215), *Accessibility for People with Disabilities* (attached hereto and incorporated herein as Attachment J.7). Notwithstanding the foregoing, the Exhibition shall be designed to not simply meet the Accessibility guidelines set forth herein but to expand upon them, utilizing current thinking and technologies to create an exhibition that is multi-modal, including multiple entry points into content for maximum inclusivity. The Accessibility requirements are merely a starting point or minimum for accessible design. Since an estimated 70-75% of all Museum visitors will enter the Exhibition, the most innovative techniques to address accessibility at all levels are encouraged.

C.2.5.3 Use of Technology. The creative use of technology is one of the richest challenges facing exhibition designers. Perhaps more important is the process of determining when and where technology is used and how it is incorporated into the broader exhibition experience. NMNH believes that technology can be a powerful tool, but its use should be carefully considered to be the most effective, appropriate content delivery vehicle, and not an end unto itself. The implication of technology in exhibition design in particular has to do with its flexibility, expandability and integration institution-wide, and the long-term commitment to continual upgrading and enhancements as new technologies become available. Given the extended timeline for this project, the designers will have to be responsive to the changing technology landscape, planning for the inclusion of at some technologies that do not yet exist. All technologies must be thoroughly tested and proven prior to implementation.

C.2.5.4 Durability. The Exhibition must be durable and must be able to withstand continued heavy use for many years by large numbers of visitors typical of Smithsonian museums. The materials, finishes, and hardware (including multi-media hardware) must be of the highest quality and chosen for, and in conjunction with, aesthetics, durability, and longevity. The workmanship and fabrication techniques employed during the fabrication and installation phase must consider and address durability and longevity. Interactive devices, whether mechanical or electronic, are particularly prone to heavy use, and must be designed and constructed with durability and longevity in mind.

C.2.6 REQUIREMENTS

C.2.6.1 Schedule. As part of its proposal, Contractor shall prepare and submit a detailed task and resource, Gant bar schedule for the Services which shall include design and deliverable milestones; critical path activities and resources; submission dates; projected dates for cost estimates and design reviews; Smithsonian review periods; Contractor review periods; meetings specified herein; and task dependencies for submissions and meetings. Unless otherwise agreed to by the parties in writing, the Media Schedule must be coordinated with the Smithsonian durations listed below in each design phase, and include sufficient time to share information with subcontractors. Contractor shall revise the Media Schedule to reflect Smithsonian comments, track the Media Schedule, update the Media Schedule as needed to remain current, but no less than monthly and provide the Schedule to Smithsonian upon request. The Contractor shall immediately notify the COTR and the Smithsonian Contracting Officer of any problem, unexpected occurrence, or delay in performing the Services.

C.2.6.2 Work Plan. Contractor shall prepare and submit a detailed work plan outlining each phase of the Services to the Smithsonian for review within twenty-one (21) days of the Contract award date. Contractor shall update and submit the work plan to the Smithsonian as needed to remain current, but no less than monthly.

C.2.6.3 FTP Website. Contractor shall provide, develop, support, and maintain a secure file transfer protocol website for the exchange of large electronic data files related to the Services (“FTP Site”) within twenty-one (21) days after Contract award. Contractor shall provide NMNH

and the Smithsonian Office of Contracting with full access, including the password, to the FTP Site and shall maintain the FTP Site throughout the Contract Term.

C.2.6.4 Quality Control Plan. Contractor shall perform quality control reviews that evaluate both the technical accuracy and discipline coordination in connection with the Services. Contractor shall submit a quality control plan to Smithsonian for review and approval within four weeks after Contract award.

C.2.6.5 Meetings. As set forth herein, Contractor shall attend and participate in project meetings at various locations throughout the duration of the Contract, which may include meetings at NMNH as well as Contractor's offices, subcontractor's offices, and the exhibit design fabrication shops and offices. All associated travel costs are subsumed in the firm fixed price set forth in Section B above. The Contractor shall prepare and distribute to the COTR a written report of all telephone conversations, meetings, or discussions related to this project. This written report shall be delivered within three (3) calendar days of any said conversation, meeting or discussion.

C.2.6.6 Documentation. The Contractor shall provide to the COTR all engineering design calculations, computer printouts, equipment data sheets and other source data used to develop the design, estimates, and contract documents. These calculations shall be prepared in a professional, accurate, and easily understood manner.

C.2.6.7 Site Conditions. The Feasibility Study defines the existing site conditions in the gallery to the best of our knowledge. The Feasibility Study and any other files and or any documents provided by Smithsonian are not warranted to show present existing conditions throughout the site; therefore the Contractor is solely responsible for independently verifying all data necessary for the accomplishment of the Services such as significant point or distribution loading or connections to the historic structure, and shall obtain all other data required to ensure the complete and adequate design of the project. This research will be required as dictated by the design interventions. While it is not the intent of the Museum to have Contractor perform a separate feasibility study, it shall be the Contractor's responsibility to conduct the necessary research, interview the relevant Smithsonian personnel, and otherwise gather all information necessary to develop an accurate survey of existing conditions prior to design development.

C.2.6.8 Reviews and Professional Responsibility. Where necessary and appropriate, the Smithsonian will provide reviews to aid in the correct interpretation of its requirements, to encourage appropriate creativity in design, to evaluate the engineering system and to assess the entire project. These reviews may be highly detailed and conducted at the highest levels within the Museum and Smithsonian. The Smithsonian reviews and approval shall not relieve Contractor of professional liability or conformance with the Scope of Work. Contractor is totally responsible for all facets of the project. This responsibility remains with the Contractor until construction is complete, as-built documents are submitted and all claims are resolved. Requirements stated herein are minimums. Innovative, creative, cost-saving designs and proposals that meet or exceed these requirements are encouraged.

- *C.2.6.9 SD-410 Reviews.* In addition to the interim reviews referenced above, at the close of each design phase, including the 100% submittal, Contractor's deliverables will be

reviewed for creative approach and technical elements such as accessibility, integration into existing building electrical systems, and any OCIO codes and standards through the Smithsonian's SD-410 review process. Contractor will be required to respond in writing to Smithsonian comments generated by the deliverables through Smithsonian Facilities' ("SF") online "I-Manage" system. For more information on the SD-410 review process, please refer to: http://ofeo.si.edu/design/dm_guide/sd410.asp. In addition, the following review provisions shall apply to such reviews:

- The Smithsonian review period for deliverables is fourteen (14) calendar days. Review comments will be transmitted to Contractor at the end of each review period for response.
- SD-410 review comments will be posted on the I-Manage system. The I-Manage system is accessible from the SF website at <http://ofeo.si.edu/>. The COTR will facilitate the registration of the Contractor and its consultants for site access and project assignment. Once registered, the Contractor and consultants will be able to read and respond to SD-410 review comments electronically and to print out comments and responses. NMNH review comments will be transmitted to the Contractor via e-mail of a pdf document.
- Contractor shall respond on I-Manage to each and every SD-410 review comment received. Contractor may be required to resubmit unclear, conflicting, or incomplete responses. Contractor will have seven (7) calendar days to provide responses to both NMNH and SD-410 review comment.
- Contractor may request on board meeting(s) to reconcile and/or synthesize comments and propose alternative solutions if warranted. Such meetings shall be arranged with the COTR.

C.3 Performance Standards

Contractor shall meet the desired list of Deliverables and work closely with the COTR to ensure that the finished project complies with the expectations of the NMNH and shall be free of errors. Contractor shall address any issues or concerns with the COTR before the end of the Performance Period.

C.4 General

C.4.1 It shall be the responsibility of the Contractor to immediately notify the SI, through the designated Contracting Officer's Technical Representative ("COTR") for the finalized Contract, of any circumstances arise that could potentially impact the proposed project in advance of the scheduled Event date.

C.4.2 Contractor shall not use the name of the "Smithsonian Institution," "National Museum of Natural History," or variations thereof, in any advertisement or publicity without the express written permission of SI.

C.4.3 If, for any reason beyond its control---including, but not limited to: strikes; accidents; government requisitions; restrictions or regulations on operations, commodities or supplies; natural disaster; inclement weather; acts of war; or, acts of God or terrorism---Contractor

understands that the Exhibition may be canceled. Such a cancellation would negate the Smithsonian's obligation to the Contractor. Should a project be cancelled, if applicable, a prorated payment based upon work performed will be made. If, for any reason beyond its control---including, but not limited to: strikes; accidents; government requisitions; restrictions or regulations on operations, commodities or supplies; natural disaster; inclement weather; acts of war; or, acts of God or terrorism---Contractor cannot perform those obligations set out under the Statement of Work (*Section C*) because they are illegal or impossible, the Contractor's non-performance is excused upon written notice to the SI. The Contractor's non-performance in this situation shall negate payment of any prorated payment based upon work performed.

C.5 Correlation and Intent

Any omissions in the RFP of such words and phrases as "the Contractor shall", "the Contractor shall", "shall be", "shall consist of", "in accordance with", "shall", "and", "the", etc., are intentional. Such words and phrases shall be supplied by implication.

Whenever the words "necessary", "proper", or words of like effect are used in the RFP with respect to the extent, conduct, or character of work required, they shall mean that the said work shall be carried to the extent, must be conducted in a manner, or be of a character that is "necessary" or "proper" under the circumstances, in the opinion of the Contracting Officer. The Contracting Officer's judgment in such matters shall be considered final.

SECTION D – PACKAGING AND MARKING

Not used.

SECTION E – INSPECTION AND ACCEPTANCE

E.1 The SI may conduct reviews as desired during the performance of the instant Contract. The Contractor will act in concert with and under the guidance of the COTR of record. The COTR reserves the right to inspect all items and may reject items not meeting specified requirements of the resultant Contract.

E.2 The Contractor shall be responsible for obtaining all information and approvals from the COTR of record prior to finalizing all Deliverables.

E.3 Design packages will be reviewed by the Exhibit Core Team along with NMNH AV staff for feasibility in our building. During the SD 410 reviews and during production/installation, other consultants from around the Smithsonian will evaluate the tie-ins with the building, IT infrastructure, network, electrical systems, and other building systems and life safety protocols.

E.4 As noted, inspection by the SI shall not relieve the Contractor of responsibility for any and all control aspects during the life of the Contract. Once installation is complete, the systems must be working without error and to the satisfaction of the NMH AV staff, the functioning media pieces