THE STATE OF THE SMITHSONIAN

HEARING

BEFORE THE

COMMITTEE ON HOUSE ADMINISTRATION HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

JUNE 17, 2015

Printed for the use of the Committee on House Administration

Available on the Internet:
http://www.gpoaccess.gov/congress/house/administration/index.html

U.S. GOVERNMENT PUBLISHING OFFICE
95–907 WASHINGTON : 2015

For sale by the Superintendent of Documents, U.S. Government Publishing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

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THE STATE OF THE SMITHSONIAN

WEDNESDAY, JUNE 17, 2015

HOUSE OF REPRESENTATIVES,
COMMITTEE ON HOUSE ADMINISTRATION,
Washington, DC.

The Committee met, pursuant to call, at 10:30 a.m., in Room 1310, Longworth House Office Building, Hon. Candice S. Miller (chairman of the Committee) presiding.

Present: Representatives Miller, Harper, Davis, Walker, and Vargas.

Staff Present: Sean Moran, Staff Director; John Clocker, Deputy Staff Director; Bob Sensenbrenner, Deputy General Counsel; John L. Dickhaus, Legislative Clerk; Erin McCracken, Communications Director; Mary Sue Englund, Director of Operations; Cole Felder, Counsel; Kyle Anderson, Minority Staff Director; Matt Pinkus, Minority Senior Policy Advisor; Khalil Abboud, Minority Deputy Staff Director/Director of Legislative Operations; Mike Harrison, Minority Chief Counsel; and Eddie Flaherty, Minority Chief Clerk.

The CHAIRMAN. I now call to order the Committee on House Administration for today's hearing on the Smithsonian Institution.

We appreciate Acting Secretary Horvath coming with all of his staff. We appreciate them bringing him.

Before I make my opening statement, let me just say I think we have all had an opportunity to look at some of the coolest things here. As you see, this is a bit unusual for a committee hearing to have Smithsonian artifacts here, but everyone will get a chance after the hearing to take a look at them all.

They are really unbelievable. I mean, you have got some meteorites here—sort of makes you think of Jurassic Park or something, right?—and the first artificial heart, a picture that the Smithsonian was just telling me they got off of eBay, actually, of Harriet Tubman, which they apparently had to do almost nothing to. It was in such great condition. Somebody took a lot of pride in keeping that picture.

Everyone will have a chance to take a look at some of these artifacts, but we thought it would be a way to sort of set the stage, if you will, for what goes on at this unbelievable national treasure of the Smithsonian. In fact, I told some of your staff, when I leave here, I am going to try to get a job at the Smithsonian. It is such a cool thing. I am kidding. But, wow, really, really amazing.

Today we are holding this hearing to discuss the current priorities of the Smithsonian Institution as well as challenges and opportunities on the horizon.

Congress established the Smithsonian Institution in 1846 to carry out the will of English Scientist James Smithson. Smithson sought, quote, "to found at Washington, under the name of Smithsonian Institution, an establishment for the increase and diffusion of knowledge," unquote.

Since that time, the Smithsonian has developed into the largest museum and research complex in the world, with 19 museums, 9 research centers and, of course, the National Zoo. The Smithsonian's collections include more than 138 million items which form the basis for the Institution's exhibits, educational programs, and research activities.

Last year more than 28 million people visited Smithsonian museums and the National Zoo, 99 million viewed their Web site, and more than 6,000 volunteers joined 6,300 employees to accomplish the work of the Institution.

The Smithsonian is much more than our Nation's attic. It plays an important role in collecting, preserving, and making accessible our Nation's history and culture as well as advancing critical scientific discovery and research.

And while the Institution encompasses the renowned museums on the National Mall, which all of our constituents appreciate visiting at absolute zero cost, it also includes research facilities in Panama, an astrophysical observatory in Massachusetts, traveling exhibits at affiliated museums across the U.S., and a strong international presence across the globe.

The size and scope of the Smithsonian presents enormous opportunities to achieve their mission of continually increasing the reach of knowledge. This Committee commends the Smithsonian for their unrelenting effort in identifying those future opportunities.

One major opportunity for the Smithsonian is to leverage their collections to enhance education and to inspire lifelong learning. Education is fundamental to the Smithsonian's mission and certainly one of the most important services the Institution can provide.

The Committee is very interested to hear how the Smithsonian is revitalizing education, especially in the case of increased digital access for schools through 3-D printing, and plans for expanding those activities. There are also significant challenges in managing such a complex entity as the Smithsonian.

One ongoing challenge is to serve as stewards of their vast collection, which includes priceless objects of immense historical, cultural, and scientific value, and which range in size, scope, and diversity from the smallest organisms and insect specimens to various artwork mediums and live animal exhibits. The Smithsonian collections are fundamental to achieving the Institution's mission now and in the future.

This Committee held a hearing last Congress, and we heard from the then-Smithsonian Inspector General who identified collection stewardship as one of the most pressing issues for the Smithsonian. Management indicated work was ongoing to improve current collections management and to plan for the future. So we look forward to hearing about that progress.

In addition to collections stewardship and education, we would like to receive an update on how the Institution is preparing for the

National Museum of African American History and Culture and that opening, which is targeted for completion next year, I believe, and about a recent announcement as well regarding the Smithsonian exhibition space possibly being part of a cultural complex in London.

The Smithsonian Institution is cherished by all Americans, and each of us feels a personal responsibility to ensure the success of this valued institution and its continued operation for future generations. The Smithsonian is truly one of the great treasures of our Nation and the world, and we look forward to the Institution's continued service.

So, again, we thank our witness for his attendance. I will formally introduce him in just a moment.

Our ranking member, Mr. Brady, was not able to attend, and I would like to recognize Mr. Vargas, the gentleman from California, who represents him today, for his opening statement.

Mr. VARGAS. Thank you very much, Madam Chair. Again, I want to thank you for holding—I think that my microphone is having some feedback problems or issues here. There you go. I apologize for that.

Again, thank you, Madam Chair. I appreciate the opportunity to be here and thank you for holding this oversight hearing today and for giving the Smithsonian a chance to show off some of its treasures earlier this morning, as you were noting. So, again, thank you very much for that.

This is a period of rising expectations for the Smithsonian Institution. A new Secretary will arrive in a few weeks, and the Smithsonian African American museum will open in less than a year from now. And, by the way, it is magnificent. Every time I drive or walk by there I get very excited. It really is looking magnificent.

Also, an historic national campaign in raising a record amount of private funds for the Institution and a museum of American Latino within the Smithsonian has been recommended by a national commission that will be reviewed by our Committee this year.

A proposed national women's history museum is about to be studied by another commission, and the visitors' advanced levels at the Smithsonian museum are on the rise.

The value of the Smithsonian endowment is at a record high, and the cost of admission of the American people is still zero.

I commend Acting Secretary Horvath—again, thank you very much—for your ability to step in quickly and to assure the continuity during the period between Secretary Clough's departure and Dr. Skorton's transition out of Cornell University.

This is a busy season for our constituents who visit the Smithsonian during the warmer months, and we often hear from them how much they enjoyed the experience.

I have to say that I was able to go recently to the National Portrait Gallery and was very excited to see the Athenaeum, Gilbert Stuart's magnificent painting of George Washington, and also to see the Landsdowne. And my understanding is the Landsdowne is about to go in for some needed work.

But it was very exciting to see those two magnificent paintings there, although I believe the Athenaeum is shared with the Boston museum. I think it is half and half. I think that is the deal.

But, again, I welcome you here to this hearing. It is such a joy to have you here. We are very, very proud of your Institution and the work that all of you have done.

Thank you very much, Madam Chair. I yield back.

The CHAIRMAN. I thank the gentleman.

Do any other members wish to make an opening comment or statement? Okay.

At this time I would like to introduce our witness. Albert Horvath became the Acting Secretary of the Smithsonian on January the 1st of this year following the retirement of Secretary Wayne Clough. He will serve in this position until the end of this month.

We had an opportunity to have you in our office last week. You said it was a very fast-paced last several months, very eye-opening, and interesting. But, as was mentioned, David Skorton will take over as the 13th Secretary of the Smithsonian on July the 1st.

As Acting Secretary, Mr. Horvath oversees the thousands of staff members and multiple projects that are underway within the Smithsonian Institution.

Before becoming the Acting Secretary, he was the Under Secretary for Finance and Administration and Chief Financial Officer of the Smithsonian, where he managed administrative offices, including facilities and maintenance, human resources, security, and financial operations. We are happy to say that that is the position that he will be returning to as well following his tenure as Acting Secretary.

Before coming to the Smithsonian in 2011, his career spanned more 30 years in the administration at five different universities and the Mellon Bank. So we certainly thank the Acting Secretary for being with us today.

At this time we recognize you for your statement, sir.

STATEMENT OF ALBERT G. HORVATH, ACTING SECRETARY OF THE SMITHSONIAN INSTITUTION

Mr. HORVATH. Thank you very much. Chairman Miller and members of the Committee, thank you for this opportunity to testify this morning.

In 1846, Congress established the Smithsonian as a public-private partnership dedicated to the increase and diffusion of knowledge. Roughly 60 percent of our annual funding comes from Federal appropriations, 40 percent from philanthropy and other sources.

The Federal commitment provides the critical foundation for all that we do and is helpful in attracting private support. We are grateful for the continued confidence of the administration, the Congress, and the American people.

I assure you that the confidence is more than justified. The state of the Smithsonian is strong. We are making great progress and will welcome our 13th Secretary on July 1, Dr. David Skorton, currently president of Cornell, who will push for even more progress.

Since January 1, I have been privileged to serve as Acting Secretary. Upon Dr. Skorton's arrival, I will return to my previous post as Under Secretary for Finance and Administration and Chief Financial Officer.

I will do so firmly convinced that the Smithsonian is more efficient and entrepreneurial than ever. It is also more effective in offering close-up authentic experiences of what it means to be an American.

For example, on May 8, I stood atop our American History Museum to witness the World War II flyover celebrating Victory in Europe Day. I am sure many of you saw the historic planes flying over the National Mall.

Our National Air and Space Museum director, General Jack Dailey, participated. The former Assistant Commandant of the Marine Corps was in the P-51 Mustang in the formation that executed the missing man maneuver.

The next day some of the participating planes were on display at our Air and Space Museum's Steven F. Udvar-Hazy Center for all to see. The Center also houses, among many treasures, the Space Shuttle Discovery, which flew over the National Mall 3 years ago.

Online, we offer a three-dimensional scan of the Wright Flyer that any teacher, student, or lifetime learner can download free of charge.

As I looked west that day, I saw our National Museum of African American History and Culture rising out of the ground. Museum curators have collected more than 33,000 artifacts, including the Spirit of Tuskegee airplane. The museum is targeted to open in the fall of 2016.

We continue to implement our 2010 strategic plan that focuses on our four grand challenges. We have an ambitious agenda. The first phase of the renovated west wing of our American History Museum reopens on July 1. The Smithsonian American Art Museum's Renwick Gallery reopens on the November 13 after significant revitalization.

We can offer so much to so many people because the Smithsonian is the largest museum and research complex in the world with passionate professionals and volunteers devoted to their work.

We have 19 museums and galleries, 20 libraries, 9 research centers, the National Zoo, and 201 affiliate museums in 45 states, Puerto Rico, and Panama. We are open 364 days a year and admission is free. We operate in more than 130 countries.

If you can't come to us, we are coming to you through digital technology. Our more than 200 Web sites attract 100 million unique visitors.

We have 6.6 million followers on Facebook and Twitter alone. Last year our museums and galleries had almost 27 million visits and another 4.5 million people visited our traveling exhibits in all 50 States.

Our collections total 138 million objects, including 127 million scientific specimens, 340,000 works of art, 2 million library volumes, more than 2,000 live animals, and much more. Some of those treasures you see on the table in front of you.

We protect and present some of the Nation's greatest treasures, everything from the Star-Spangled Banner to the Hope Diamond, the Landsdowne portrait of George Washington to the skeleton of T-Rex, Edison's light bulb to Nat Turner's Bible. We take stewardship of these treasures very seriously, as reported to this Committee 2 years ago.

Since that time, we have made many improvements and completed an in-depth study of collection space needs that will inform our long-term capital plan.

Our 500 scientists are making important discoveries, especially regarding biodiversity issues through our ForestGEO, or Global Earth Observatories, network. It is a worldwide partnership monitoring the health of 6 million trees in 24 countries.

Our new Tennenbaum Marine Observatories initiative, or MarineGEO, seeks to replicate that success and assess the health of coastal areas and the oceans.

We offer American, Asian, and African art. We deliver educational materials to students and teachers in all 50 States. More than 2,000 learning resources, all tied to State standards, are available online for free.

For 30 years our Smithsonian Science Education Center has been improving K through 12 education in our Nation's schools through its innovative STEM program.

We do have concerns about the age and upkeep of our 12 million square feet of facilities, particularly at our Air and Space Museum, our zoo, our Freer Gallery of Art, our Arts and Industries Building, The Castle, and other sites. We will need your continued support in those areas to ensure the vitality of these spaces, many of which are historic.

Our 6,400 dedicated employees and 5,500 generous volunteers are creative, resourceful, and dedicated to our mission. That is why for the fifth year in a row the Smithsonian was ranked as one of the best places to work in the Federal Government. All of us are honored to be part of this great American Institution.

As we face both exciting new opportunities and imposing challenges, we will carefully steward the critically important resources provided by the Federal Government.

Again, I thank you for this opportunity, and I look forward to your questions.

[The statement of Mr. Horvath follows:]

Smithsonian Institution

New

January 2015

Albert G. Horvath

Acting Secretary of the Smithsonian Institution

Albert Horvath became Acting Secretary of the Smithsonian Jan. 1. He will serve in this position until David J. Skorton, the 13th Secretary of the Smithsonian, arrives in July. As Acting Secretary, Horvath will oversee a staff of 6,400 and multiple projects that are underway, including construction of the National Museum of African American History and Culture and a major digitization project to help increase public access to the Smithsonian's collections online.

Before becoming the Acting Secretary, Horvath was the Under Secretary for Finance and Administration and chief financial officer of the Smithsonian. He oversaw many Smithsonian offices with more than 2,200 employees, including facilities and maintenance, human resources, security and financial operations. He joined the Smithsonian in 2011.

Horvath has more than 22 years of experience working in administration for some of the leading research universities in the country. He had been at The Pennsylvania State University, his alma mater, since 2007, serving as vice president for finance and business for two years until he was named senior vice president for finance and business/treasurer. He was responsible for financial, endowment, business and administrative activities at all 24 Penn State campuses with a $4.2 billion operating budget.

Before joining Penn State, Horvath was executive vice president of finance and CFO at Columbia University (2004–2007), where he had oversight for all financial activities of the university, including the medical center, and developed a five-year capital plan and debt strategy.

Horvath joined the California Institute of Technology in 2000 as their associate vice president for finance and controller, and he became Caltech's CFO in 2001, a position he held until joining Columbia University.

From 1994 until 2000, he was controller at New York University and, before that, served in senior roles at Carnegie Mellon University (1988–1994). He began his career at Mellon Bank (1981–1988) in his hometown of Pittsburgh before moving into higher education.

A native of Pennsylvania, Horvath earned his master's degree in business administration at Duquesne University (1985) and his bachelor's degree in accounting at Penn State (1981).

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Smithsonian Institution

Statement of Acting Secretary Al Horvath
Oversight Hearing on the Smithsonian
Committee on House Administration
U.S. House of Representatives
June 17, 2015

Thank you for the opportunity to testify before the Smithsonian's major oversight committee in the U.S. House of Representatives, the Committee on House Administration.

In 1846, Congress established the Smithsonian as an independent federal trust instrumentality dedicated to the "increase and diffusion of knowledge."

The Smithsonian greatly appreciates the continued support of Congress, the Administration, and the American people, enabling the crucial role we play in advancing the civic, educational, scientific, and artistic life of this nation. As a public trust, the Smithsonian addresses some of the world's most complex issues — and uses new technologies to broaden access to information for citizens, students, and policy makers.

The Smithsonian is a unique public-private partnership that has achieved outstanding results for 169 years. The federal commitment provides the foundation for all we do, and is especially helpful in attracting private support. We leverage our federal funding to enrich the lives of the American people and advance our standing as one of the most respected and trusted institutions in America.

We continue to implement our 2010 Strategic Plan that focuses on four "Grand Challenges," promoting interdisciplinary and Institution-wide collaboration. That plan has been extended to 2017. Accordingly, we are improving facilities maintenance and collections care to be better stewards of America's treasures. We are also working with new federal, state, and local partners to avoid redundancies and expand our reach. We work with virtually every cabinet-level federal agency.

The Smithsonian is large and diverse, encompassing art, history, science, education, and culture. We have 19 museums and galleries, 20 libraries, nine research centers, the National Zoo, and 201 affiliate museums in 45 states, Puerto Rico, and Panama. We are open 364 days a year — and admission is free. We have research and education facilities in eight states and the District of Columbia, and operate in more than 130 countries. Last year, our museums had almost 27 million visits, and another 4.5 million people visited our traveling exhibitions, in all 50 states and in 263 communities around the nation. In addition, *Smithsonian Magazine* is now read by more than seven million people. The Smithsonian Channel, which last year featured exciting content on the Civil War and the

history behind the Star-Spangled Banner, is currently distributed by eight of the top nine cable operators that serve a total of 74 million households.

Our collections total 138 million objects, including 127 million scientific specimens, 340,000 works of art, and two million library volumes. We also care for 157,000 cubic feet of archival material — and more than 2,000 live animals. We have the Star-Spangled Banner; Morse's telegraph; Edison's light bulb; the Hope Diamond; the Wright Flyer; one of Amelia Earhart's planes; Louis Armstrong's trumpet; labor leader Cesar Chavez's jacket; the Lansdowne portrait of George Washington; the Congressional Gold Medal awarded to Japanese American World War II veterans; the *Spirit of Tuskegee* airplane; the camera John Glenn used on his voyage into space; Asian, African, and American art; the Apollo 11 Command Module, *Columbia*; and the space shuttle *Discovery*. We hold all these objects in trust for the American people.

The year 2014 marked many anniversaries at the Smithsonian: the bicentennial of the Star-Spangled Banner; the 125th anniversary of the founding of the National Zoo; the 50th anniversary of National Museum of American History; the 50th anniversary of the National Museum of African Art; the 10th anniversary of the opening of the National Museum of the American Indian on the National Mall; the 20th anniversary of the National Museum of the American Indian's Heye Center in New York City; and the 10th anniversary of the opening of National Air and Space Museum's Steven F. Udvar-Hazy Center in Virginia. In addition, the Charles McC. Mathias Laboratory opened in September at the Smithsonian Environmental Research Center in Edgewater, Maryland, and the Cooper Hewitt, Smithsonian Design Museum reopened to the public in December after a major renovation.

In the past several months, our visitors have experienced nearly 100 new exhibitions, including *Through the African American Lens: A Preview of the National Museum of African American History and Culture*, curated by the National Museum of African American History and Culture and presented at the National Museum of American History; *Outside the Spacecraft: 50 Years of Extra-Vehicular Activity* at the National Air and Space Museum; *3-D Portrait of President Obama* at the National Portrait Gallery; *Orchids: Interlocking Science and Beauty* at the National Museum of Natural History; *American Bison* at the National Zoo; the high-tech *Immersion Room* at the renovated Cooper Hewitt, Smithsonian Design Museum; *Out of Many, One*, the giant National Portrait Gallery landscape portrait that decorated the National Mall; *Shirin Neshat: Facing History* at the Hirshhorn Museum and Sculpture Garden; *Peacock Room REMIX: Darren Waterston's Filthy Lucre* at the Arthur M. Sackler Gallery; *The Divine Comedy: Heaven, Purgatory, and Hell Revisited by Contemporary African Artists* at the National Museum of African Art; *Bridging the Americas: Community and Belonging from Panama to Washington, D.C.* at the Anacostia Community Museum; *Freedom Just Around the Corner: Black America from Civil War to Civil Rights* at the National Postal Museum; and *Richard Estes' Realism* at the Smithsonian American Art Museum.

And exciting exhibitions are on the horizon, including *The Great Inka Road: Engineering an Empire* at the National Museum of the American Indian and multiple exhibitions at the National Museum of American History's renovated West Wing, including *Places of Invention*, *Spark!Lab*, and *American Enterprise and the Value of Money*.

The Smithsonian's 500 scientists are tackling vital issues of the day, making important discoveries — and sharing them with the public. For example, scientists at the Harvard-based Smithsonian Astrophysical Observatory are using telescopes in outer space to discover new planets. Scientists there have discovered an exoplanet dubbed a "mega-Earth." Found in the constellation Drago, Kepler-10c is a rocky world weighing as much as 17 Earths.

This year, our consortia launched the Smithsonian Institute for Biodiversity Genomics. The launch of the Institute will provide the high-profile, multidisciplinary scholarship, leadership, collaborative spirit, and logistical support necessary to enhance our understanding of the natural world through genomics. The collections and field-based initiatives of our museums and research centers include the National Museum of Natural History, the Smithsonian Tropical Research Institute, the National Zoo, the Smithsonian Conservation Biology Institute, the Smithsonian Environmental Research Center, and the Museum Conservation Institute.

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The National Museum of Natural History is the leading partner in a global effort called the Encyclopedia of Life, an ambitious, 10-year project that will become a key repository of scientific information about virtually every form of life on Earth. The Encyclopedia is an online database that has financial, logistical, and research support from numerous partners, including the MacArthur and Sloan Foundations.

With our international partners and worldwide reach, the Institution is particularly well connected to study biodiversity issues. The Smithsonian's ForestGEO (Global Earth Observatories) network is a worldwide partnership of more than 95 institutions working to monitor the health of six million trees (10,000 species) on 61 plots in 24 countries. Our new initiative, Tennenbaum Marine Observatories, or MarineGEO, seeks to replicate this success and assess the health of coastal areas and the oceans at large.

On the education front, we deliver educational materials to students and teachers in all 50 states. More than 2,000 learning resources, all tied to state standards, are available online for free. We have several new education centers , including centers at National Museum of the American Indian, Smithsonian American Art Museum, National Postal Museum and National Museum of Natural History's *Q?rius*, our new 10,000-square-foot science education center for teenagers. And there are more to come. In addition, our digital badging program (similar to merit badges in Scouting) is called Smithsonian Quests. This exciting new digital tool motivates young learners by helping them build skills, explore their interests, and try out new Smithsonian-inspired roles. The program now has more than 4,000 registered users from all 50 states and more than 50 countries. In addition, this year we piloted a first-of-its-kind collaboration with the National Park Service and the U.S. Department of State's Diplomatic Reception Rooms to create two

digital badge opportunities under the Inter-Agency Collaboration on Education's "Declaration of Learning" initiative.

We continue to digitize our objects, specimens, archival materials, and library books. So far, our museums and libraries have created digital images for 2.2 million objects, specimens and books, and electronic records for 25 million artifacts and items in the national collections. Our archives have created 3.5 million digital images, and have electronic records for close to 100,000 cubic feet of archival material. Our new Transcription Center, with over 5000 volunteers, has transcribed 49,000 pages of data in the last year and a half alone. Furthermore, we are implementing conveyor-belt technology to digitize full collections. The Freer Gallery of Art and Arthur M. Sackler Gallery released their entire collections online in January 2015, providing unprecedented access to one of the world's most important holdings of Asian and American art. "Open F|S" (Freer/Sackler) is free to the public and allows access to most of the 40,000 artworks, in high resolution and without copyright restriction. Approximately 73 percent of the Cooper Hewitt, Smithsonian Design Museum's collections are now available online. These efforts establish the Smithsonian as a leader in digitizing our nation's intellectual capital and cultural heritage for future use.

Digital technology allows us to reach new, diverse audiences more than ever before. Our more than 200 websites attract 100 million unique visitors, and, in social media, we have 6.6 million followers on Facebook and Twitter alone, with tens of thousands more engaging with us on other online platforms.

As part of our work to broaden access to the nation's treasures, a new report, *Delivering on the Promise of the Digital Smithsonian,* outlines the action agenda we have set for the digital arena. It highlights the Institution's major priorities: 1) use technology to enhance the in-person visitor experience; 2) digitize the collections; 3) make Smithsonian digital content easy for the public to find and use; and 4) spark engagement and participation among learners everywhere.

The Smithsonian takes collections stewardship very seriously, as stated before this Committee at a hearing two years ago. Since that hearing, the Smithsonian has made many improvements. We recently concluded an in-depth study of collections space needs and published the results in *Securing the Future for Smithsonian Collections: Smithsonian Collections Framework Plan (2014).* The Plan documents requirements to add new collections storage space and improve existing space and sets out a multi-year plan to improve and expand space for collections across the Institution, including a variety of storage spaces and related laboratory and processing spaces. Implementing the plan will require authorization for construction of new facilities and renovations and improvements to equipment in existing facilities, which we expect to send to this Committee this year.

The National Air and Space Museum opened in 1976, almost 40 years ago. Hosting an average of 7 million visitors annually, it is the most visited museum at the Smithsonian and second most visited museum in the world according to Time magazine. Its major building systems are at the end of their useful lives, and we have long anticipated a major

renovation project there. The early phase of design for the renovation revealed that we also have a major problem with the building's exterior envelope. The building's exterior cladding system, made of Tennessee marble (limestone), has exhibited signs of degradation in several locations and careful forensic analysis has determined that the stone panels must be replaced. In addition, the Sustainability and Exterior Envelope Studies found that the combination of deficiencies in the exterior envelope, the age and condition of the existing HVAC systems, and the higher-than-designed-for visitation all contribute to the building's energy inefficiency and create unacceptable interior environmental risks for the public, staff, and collections. The President's FY 2016 Budget requests $34.65 million to start addressing these issues at the Air and Space Museum and includes pre-construction activities required for collections care and design work for the exterior shell of the building.

In addition to the National Air and Space Museum, many of the Smithsonian's buildings are old, historic, and reaching the age where significant renewal is necessary. The Arts and Industries Building shell revitalization project replaced the roof and windows and incorporated some structural improvements. However, much interior work remains. In the Freer Gallery of Art, we are upgrading the humidification system, which is unreliable and frequently fails, putting collections at risk for loss or damage. At the National Zoo, among other improvements, we continue to install the smoke evacuation system in the animal facilities, and increase traffic and pedestrian safety. Those are just some of the improvements we are making. Continued maintenance and revitalization of Smithsonian facilities are necessary to ensure optimal stewardship of the Nation's Treasurers and a safe, secure, and healthy environment for our millions of visitors and our employees. Our budget requests $200.0 million for major renovation projects.

Last year we briefed this Committee on the Smithsonian National Zoological Park and the Smithsonian Conservation Biology Institute, our stewardship of our important collection of animals, and our research and conservation efforts in support of our mission to save species from extinction. In the past 18 months we have had more than 200 successful animal births. Among those births are four lion cubs, six lions, two spectacled (Andean) bears, and a grey seal. All are doing well. Our panda cub, Bao Bao, celebrated her first birthday last August; we added a new female Asian elephant, Bozie; and welcomed three new Asian elephants from the Calgary Zoo in Alberta, Canada, expanding our herd to seven. We have hired additional highly qualified specialists, including veterinarians, conservation specialists, animal keepers, biologists, and nutritionists to ensure the safe care of our animals. Communication among animal care staff is more effective due to enhanced procedures now in place. We recently completed a construction project in the Cheetah Conservation Station that will improve the functioning of the animal doors and gates, and improve the fencing around the hornbill/lesser kudu (formerly wallaby) yard. In addition, we are implementing an extensive review of our animal pre-quarantine checklist, which will put measures into place to ensure that animals will only enter the quarantine at the zoo once their exhibit area is complete. We are committed to excellence in maintaining the highest standards of animal welfare and safety.

With the continuing support of the Congress, the Administration, our Board of Regents, and the American people, we will open more doors in the future — such as the new National Museum of African American History and Culture currently under construction and scheduled to open its doors in the fall of 2016. We have maintained a tradition of serving our nation and the world as a source of inspiration, discovery, and learning. Today, with our free museums, distinguished research and scholars, iconic American treasures, and the vast array of information accessible from its websites, the Smithsonian remains a valuable resource for the American people.

We can do all this thanks to 6,400 dedicated employees, including award-winning scientists and scholars, curators, researchers, historians, and experts in fields from astrophysics to zoology, and 5,500 generous on-site volunteers, 340 research fellows, 935 research associates, 420 interns, and 5,000 digital volunteers— brain power that benefits the Smithsonian and the world many times over. They all care deeply about their work and the Smithsonian. That is why the Smithsonian was, for the fifth year in a row, ranked as one of the best places to work in the federal Government.

The Smithsonian is more innovative, disciplined, focused, nimble, and self-reliant than ever before. We are determined to expand access to new and diverse audiences, in keeping with our original mission. As we face both exciting new opportunities and imposing challenges, we will continue to take full advantage of our many strengths and carefully steward the critically important resources provided by the federal government.

Again, I thank you for this opportunity and look forward to your questions.

The CHAIRMAN. Thank you very much. I appreciate that.

You mentioned that you had 138 million artifacts. As you may or may not know, the Miller family has a bit of history with one of those 138 million.

My husband, who was a fighter pilot in Vietnam over 30 years ago, delivered an F-100 Super Saber Jet, which is on display there now at Udvar-Hazy. So all the old fighter pilots like to hang around and look at old jets, that is for sure, and remember the glory days there.

At any rate, my first question for you is really—I was looking through your strategic plan here. As you mentioned, you really want to increase and revitalize education, I have a particular interest in that, as I think I mentioned to you when you were in my office.

Southeast Michigan, where I come from, was really so incredibly hard hit during the very painful economic transition, our kids could hardly even get on a bus to take a field trip anywhere.

One of the things we really tried to do during that time—many of us in some of these areas—was to just make sure that—with this fantastic wealth of knowledge and all of these things that are happening, whether it is the Library of Congress or the Smithsonian, et cetera, how we can have resources for the teachers to make that part of the curriculum.

You know, kids are so used now to accessing everything electronically, and as you mentioned about these 3-D printers, they really are amazing, what they are doing in the schools.

So could you talk a little bit about that part of your revitalizing education portion of your strategic plan and how you can help with education throughout the entire country here, really making sure that kids have access to all of these fantastic avenues of knowledge.

Mr. HORVATH. Certainly. The Smithsonian, at its core, is an educational institution. We have these wonderful objects. We do tremendous research. But one of our main objectives is to be able to get this information out as broadly and widely as possible.

We have had a long tradition of education being an important aspect of what we do. As mentioned, for 30 years, through the Smithsonian Science Education Center, we have been providing science curriculum free of charge throughout the country tailored to local standards for teachers, for students, for school districts. We feel it is important to try and help address the issues of STEM education and the like across the country.

A place where a couple of our priorities in the strategic plan come together is education and digitization. So one of the buzz phrases that we have developed at the Smithsonian is, "If you can't come to the Smithsonian, we want to get the Smithsonian to you," and one of the strategies to do that is through digitization.

So all of these wonderful objects that we have, we are trying to digitize all of them, make them available to people across the country, in fact, across the world, for students, K through 12, higher education, lifelong learners, and provide these objects so that they can be studied and worked with in classrooms across the U.S. and not only in our spaces in Washington, D.C.

We are working on 3-D printing so that not only can you render 3-D objects online, but then also transfer them to printers and have your students create their own models of the Wright Flyer or the Space Shuttle. We are, in fact, in the middle of digitizing the Space Shuttle at this time.

So all of these activities and many, many more we are focused on, again, to try to continue to play an important role in furthering education across the country.

The CHAIRMAN. Could you tell us a little bit—I guess the National Zoo has, really, your most visitors and you have more visitors there than any of your other facilities. But among the museums, it is the Air and Space, I believe, that has the most amounts of visitors. But at any——

Mr. HORVATH. Air and Space and Natural History always are neck and neck.

The CHAIRMAN. Neck and neck. Okay.

Well, I understand that sort of the outer envelope, if you will, of the Air and Space is in need of some serious structural repairs. Maybe you could tell us a bit about how you are planning for that and what we need to be aware of here.

Mr. HORVATH. Certainly. We have a long-term capital plan. We have, as I mentioned, 12 million square feet of space. And so keeping those buildings vital and functional is an important priority for us.

A renovation of the building systems of Air and Space has long been in our plan, and we had envisioned it being our next big priority following the completion of the National Museum of African American History and Culture.

As we began the process of assessing the work that we would need to do in our feasibility study, we unfortunately uncovered the fact that the outer envelope, the facade that is comprised of Tennessee pink marble, is actually thinner in size than it should have been. And, unfortunately, after 40 years of wear and tear, it is starting to crack and bow.

We have now had three independent assessments by experts, and they have all concluded that that stone needs to come down and be replaced. It is just too thin to be repaired. And so all of that stone will need to be replaced. That is in addition to the other work that we had contemplated we would need to do anyway, like upgrading our air handling systems, completing repairs on the roof and the like.

The building opened in July of 1976. It was built with a notion that we would receive about 3 million visitors a year. We now receive about 6 or 7 million. So it has received a lot more wear and tear than was envisioned. And, obviously, our knowledge about what it takes to maintain precious and delicate objects like this has advanced as well.

And so, unfortunately, we are looking at a price tag of probably $500 million to fully renovate that building. It is a project that we are currently in the process of designing. We would hope to begin the renovation work sometime in 2017.

And our plan is to try during the course of that renovation to keep portions of the building open to the public because, again, since it is one of the most heavily visited museums in the world,

we don't want to take all of those objects offline if we can possibly avoid that.

The CHAIRMAN. Wow. That is a huge price tag.

Mr. HORVATH. Yes, it is.

The CHAIRMAN. Okay. I appreciate that.

The chair recognizes Mr. Vargas for questions.

Mr. VARGAS. Thank you very much, Madam Chair.

Madam Chair, I can't help but get excited when you talked about your family's involvement with the Smithsonian. I would be remiss to say that, in San Diego, we have affiliated museums. We also have the San Diego Air & Space Museum that is affiliated with the Smithsonian.

And it is the same thing there. You get a lot of the pilots. They not only hang around there, but they also teach the kids how to work on planes and how to repair them, create them. And it is really exciting. I have had a chance to go there a few times, and they really do a great deal.

So I would be remiss if I didn't thank the Smithsonian because I think there is four or five institutions, actually, in Balboa Park that are affiliated with the Smithsonian.

When you are talking about, if the citizens can't come to the Smithsonian, the Smithsonian will come to them, I know that you do that with affiliated museums. And we appreciate that certainly in San Diego and, I am sure, throughout the country.

I do want to ask a couple of questions. Does the Smithsonian have a public position on the creation of a potential museum, a American Latino museum? And if Congress were to authorize it, could the Smithsonian absorb the work involved with the project?

Mr. HORVATH. Should Congress authorize and approve funding for a Smithsonian American Latino museum, we would be honored to add such a museum to our portfolio and we would do everything in our power to do an exceptional job in delivering the museum to the American people.

Mr. VARGAS. Thank you.

Same question. What effect has sequestration had on the Smithsonian's operations over the last few years, if any?

Mr. HORVATH. The budgetary uncertainty around the Federal budget has certainly forced us to do a lot of scenario planning and rethinking about priorities and potential new programs.

We were able to weather the sequestration that was implemented a couple of years ago because we had done a lot of preparation. But we knew, if there were long-term and additional reductions made, we would have to fundamentally rethink some of the basic operating premises of the Institution.

As you might imagine, given some of our facilities' challenges, like the one I just mentioned previously, we are obviously keenly aware of how important continued strong Federal funding will be for us to not only deal with some of those more acute problems, but to allow us to continue to push forward in terms of digitization, collection care initiatives, expansion of education programs and the like.

So, at present, we continue to develop a number of different strategies, depending on the levels of funding. We have also spent quite a bit of time and effort to ensure that our ability to raise non-

Federal funds, private funds through philanthropy, through sponsored project support and other means, is as advanced and as effective as possible.

Mr. VARGAS. Thank you.

By the way, a little pet peeve of mine. Sequestration. I wasn't here when they voted on it. But it comes from the Latin term "sequi," to set aside.

That is why you sequester a jury. It doesn't mean across-the-board cuts. But, anyway, that is just a little pet peeve of mine. I don't know why they use that term. But, anyway, it is the term they chose.

We are all very excited, all of us, about the opening of the National African American museum next year. Are there any special events planned around it that the public should be aware of?

Mr. HORVATH. We are in the midst of planning for the grand opening of the museum next fall. And so we are at the early stages. We intend to begin doing some preliminary kinds of events leading up to that. The museum itself is not waiting for the building to be finished.

We just opened a new exhibit in American History to begin showing some of the collection that has been amassed over the course of the last several years called "Through the African American Lens." And I would encourage everyone who has an opportunity to go and see it.

And so, in expectation of the museum opening and not just generating excitement from the seemingly day-to-day changes that take place in the construction, we are trying to do programming and the like to get people excited and ready for the opening of the museum.

Mr. VARGAS. Okay. I am out of time. My time is up. And, again, thank you, Madam Chair. I appreciate it. I yield back.

The CHAIRMAN. Thank you.

Mr. Harper from Mississippi.

Mr. HARPER. Thank you, Madam Chair.

And thank you for your service in such an important role. I have to say, last night, I hope everyone got to go to the Congressional Night at the National Portrait Gallery. It was an incredible location and very well done. So thanks to all that were involved in that.

Now, there is always concern on the upkeep of buildings and making sure that we don't defer maintenance. That happens sometimes just because the money is not there.

And I know we have a new museum that has been talked about that will open next year, a very exciting time. There are others that are being discussed.

But there is also a concern that, as we go forward and we build new museums, that we have the ability to maintain them and do the upkeep and maintenance. So this is going to be a major lift.

But, as far as families, the Air and Space Museum is one that everyone likes to go to. And it is very special because there is a plane there from my congressional district, from Meridian, Mississippi, the Key brothers' airplane called the "Ole Miss," for which they set the record for longest time in the air, 27 days, back in 1935.

And their partner, mechanic, inventor, and friend, Mr. A.D. Hunter, invented the shutoff valve so you could safely transfer the fuel, which even today, with just some minor modifications, is still what is used today.

And you have got this single-engine plane that they stayed in for 27 days with a catwalk built around it because they had to climb out and service the engine during flight.

So during construction we are confident that will be fully displayed. But, anyway, that is another deal there. But it is true. Every exhibit has a great story. And so we are very thankful for that and those opportunities that are there.

How do you foresee going forward—and I know Chairman Miller discussed this. You are planning on keeping this open, at least in part, during those construction years. How many years will that Air and Space renovation take place?

Mr. HORVATH. We are still in the midst of very detailed design and planning. Right now our best estimate is it will take about 4.5 years of renovation time, and we will try to do it in phases through the building.

It is a little complicated because all of the building systems are integrated, but that is part of the challenge of what we are trying to study at this point.

So, again, it is very, very important for us to try as much as possible to keep portions of that building open so that our visitors can continue to benefit from the tremendous artifacts that we have.

Mr. HARPER. And other buildings are aging as well——

Mr. HORVATH. Right.

Mr. HARPER [continuing]. And will have those needs as well.

Is there a plan for which we will make sure that maybe we don't wind up with a big hit and maybe you see doing these along in stages where we don't wind up with a $500 million one-time or over-a-few-years major renovation?

Mr. HORVATH. Yes. There are a couple of examples where we have been doing that over the last several years. At the Natural History Museum, everyone knows the dinosaur hall is currently closed. That is partially driven by the desire and need to renovate that portion of the building as well as do some needed maintenance on the artifacts.

We have taken the same approach at American History. So back in 2008 we reopened the center core of the building, now the Star-Spangled Banner hall. We are working on the west side of the building and are very excited about reopening the first floor of that renovated space in July. And we have taken the same approach at the National Zoo.

So to the extent that, in some of the larger, more complex buildings where taking on the entire building would be astronomical in terms of cost, we have tried to parse them out.

In some cases, like at the Air and Space Museum, because of the way the building was built, it is just not as practical to be able to close portions of it and work on it in various points in time.

One of our biggest challenges is making sure that we continue to address the most pressing needs and try to use a combination of both maintenance as well as facilities capital funding to be as thoughtful as possible and keep our buildings in good shape.

Mr. HARPER. And my time is almost over, but let me ask you this.

138 million items, probably more. Not everything we probably want to keep. You know, I am a bit of a pack rat; so, I don't want to throw anything away.

But when you are deciding new items to go into the collection, if you could just very quickly, is there a basic criteria that you have for how that is decided on?

Mr. HORVATH. Certainly. We look at the importance of that object to the collection and the particular discipline that it supports. We ensure that we can safely and effectively keep it. And we also make sure that we have the expertise to study it and to tell its story.

Mr. HARPER. So not everything makes the cut, obviously.

Mr. HORVATH. Not everything makes the cut. No.

Mr. HARPER. All right. Thank you very much.

I yield back.

The CHAIRMAN. Mr. Davis.

Mr. DAVIS. Thank you, Chairman Miller. And I wish you well on your next endeavor, going to work for the Smithsonian, as you mentioned.

Please, sir, check her references.

Don't cut my mic, Judge Vargas.

First off, I want to say thank you, Mr. Acting Secretary. My twin boys, who are 14, going into the ninth grade, were part of a large high school group that was out just last week and enjoyed many of your facilities. Some of the feedback was that, obviously, besides hanging out with me, going to the Smithsonian was actually one of their favorite activities.

And it is something that we see many folks and families go through every day here. It is what you do on a regular basis. I think this Committee—hopefully, today you understand we truly appreciate what you do and what the many men and women who work at your facilities do on a regular basis to show what our Nation is all about. So thank you for that.

Education was a key point of your opening testimony. And I noticed you mentioned some of the STEM programs, that the Smithsonian works with school districts throughout this Nation, especially K through 12 education.

Can you actually go into a little further what you do at the Smithsonian to ensure that our students who may not be able to make it out here to Washington, D.C., or to other facilities in the Nation—how do they have access to your facilities? And how do your STEM programs work? And, also, how do teachers who may not be involved with them know how to contact you to get involved?

Mr. HORVATH. We have tremendous educational resources at the Smithsonian, some attached to the specific museums or research centers, some that are coordinated in more central ways.

One of our big initiatives across the board and, of course, in education is to take what we have and get it to folks, regardless of where they are geographically throughout the country.

So the Smithsonian Science Education Center for 30 years has been putting together curriculum that is tied to State standards that teachers in school districts can implement and use to teach

science to kids from K through 12. It is hands-on learning and it is supplemented by a number of lesson plans and activities that can be downloaded. All of that material is provided for free.

We have a large Smithsonian traveling exhibition service which takes Smithsonian content throughout the country. And so, at many museums, large and small, across the country you can benefit from the same kind of content that you see in Washington, D.C., at your local museum throughout the country.

More and more we are trying to put a lot of our material online so that, even if you are not using some of the more formal materials that we provide, a teacher can download information, and can use a variety of support material that we provide to integrate into their classroom.

So we view education as central to our mission and as a way of really enlivening these objects and telling their story and using them in a way that helps inspire kids to learn.

Mr. DAVIS. Well, I appreciate what you do to make that happen, again, for many students who don't get a chance to come out here and experience what we see and sometimes take for granted on a daily basis.

What can we do as an institution to help encourage more activity, more usage, of your programs?

Mr. HORVATH. I think you are doing it. The more we can engage people in our facilities, in our programs, to understand the richness, the breadth and the depth of what we do, I think together we can learn about places where perhaps we aren't filling a gap where we could fill a gap.

We recognize that we can't do everything, but we believe that we can have a significant impact on improving the delivery of STEM education throughout the country and in teaching history, particularly about the history of the American experience and the like.

Mr. DAVIS. All right. One last question.

Do you have an idea—if you can, give me an estimated percentage of how many school districts you are putting your STEM education program into nationwide.

Mr. HORVATH. I can get you specific numbers as part of the final testimony. I don't have those numbers offhand. But we——

Mr. DAVIS. That would be great.

Mr. HORVATH [continuing]. Make them available to anyone who wants them, and we actively engage with folks across the country.

Mr. DAVIS. Well, thank you very much for your time.

Madam Chairman, I am going to yield back so that our star pitcher from the congressional baseball game can have time to ask questions.

The CHAIRMAN. Thank you very much.

Mr. Walker, our star pitcher.

Mr. WALKER. Thank you, Ms. Chairman and Mr. Catcher.

I am fascinated by the Smithsonian over the years, something that predates even our Civil War by nearly 15 years.

I believe you have been there about 5 years. Is that correct?

Mr. HORVATH. Four. Yes.

Mr. WALKER. Four years.

One of the things you talked about—I have got a couple of questions I want to get to, but something you brought up I want a little bit more information on.

We talked about the African American museum that is opening. What is the open date? Do we have that projected?

Mr. HORVATH. It is fall of 2016. We don't have a specific date yet.

Mr. WALKER. Okay. And my question specifically regarding that: Exhibits and history there, will we remove those?

For example, I was just thinking of George Washington Carver as you were talking and all the different inventions and what an amazing man he was.

Do we remove that from one Smithsonian to put it—or do we duplicate it? Can you talk about that process. Because I don't want one missing—one or the other, if you only have time to go to one or the other. Do you understand where I am coming from?

Mr. HORVATH. I do.

Mr. WALKER. Okay.

Mr. HORVATH. On a pretty frequent basis, move collections around our various museums. So the American Art Museum actually tells the story of America through art as opposed to specific historic artifacts. So we will sometimes move paintings from there to the American History Museum.

So there will be times when we will move certain objects back and forth, depending on the nature of the exhibition that is on or the particular story that we are trying to tell. So things will move around on a routine basis.

Mr. WALKER. And I appreciate your answer.

My concern is that we make sure that all students are getting a great history from some of the people of ethnic backgrounds who have impacted us and that they didn't miss that even if they were hitting one and not hitting the other one.

A lot of technological advances in the last few years. Can you discuss strategy as far as connecting the Smithsonian, continuing to make it attractive to the younger generation.

We see so many times in the corporate world—or my background is the ministry world—where we don't make the adaptations to connect with the next generation.

Can you talk about that. Is there marketing strategy? How do we move forward with that?

Mr. HORVATH. It is a big thrust for us, ensuring that we have an institution that appeals to people who look like me and people a lot younger, like my son.

One example of what we have been able to do is the recently renovated and reopened Cooper Hewitt Museum in New York. We closed that museum for 3 years, fully renovated it, and reopened it in December 2014 to great fanfare by integrating tremendous amounts of technology into the visitor experience.

There is a new object called the "Pen," which you can get when you walk in the door. And as you go along through the various exhibits, you touch a particular part of the exhibit and it downloads that object into an account for you, which you can then, when you are finished, email to yourself and continue to curate your collection when you get home or learn more about it because you only had a limited amount of time at the museum.

We are looking at the African American History and Culture Museum as well to integrate making of interactive digital and video experiences into the more traditional experience of physical objects.

So we are taking that very, very seriously and looking to——

Mr. WALKER. Do you find that as a difficult balance? Because you don't want to dumb-down some of the exhibits and some of the historical aspects of it, and I guess that is part of the process as far as trying to find the right balance. Is that a fair assessment?

Mr. HORVATH. I think what we are looking for are opportunities to really amplify the objects. One of the latest apps that we created in Natural History is called "Skin and Bones." It is very cool.

You take your phone. You look at a particular skeleton, and on your phone that skeleton comes to life. And you can see what that skeleton looked like when it was on the ground, and it does some virtual-reality movement and the like.

So we think the technology can really enhance the experience by giving you a much richer opportunity to dig in and to learn more.

Mr. WALKER. I appreciate you guys working hard to be proactive in the days ahead.

Thank you, Ms. Chairman.

Thank you, Mr. Horvath.

I yield back.

Mr. HORVATH. Thank you.

The CHAIRMAN. Thank you very much. Talking about skeletons, let me just ask you a question here about the Natural History Museum, and the T-Rex exhibit. You know, it is too bad you had to close the entire dinosaur exhibit down, but I guess I understand that.

But when is it all going to be open again?

Mr. HORVATH. 2019.

The CHAIRMAN. 2019.

Mr. HORVATH. 2019. Yes.

The CHAIRMAN. So you can't open any part of it without all of it opening?

Mr. HORVATH. No. All of the renovation that we need to do is pretty extensive. It is a fairly large piece of the building. And the exhibits themselves, the skeletons and the like, are undergoing a fairly sensitive restoration as well. That is pretty painstaking work.

So what we are trying to do, again, through technology and other means is to try to satisfy that dinosaur itch that a lot of people have because that is one of the most popular exhibitions that we have in the Smithsonian.

The CHAIRMAN. Yes. It really is.

Just one last question and we will conclude the hearing here.

But we have had an opportunity to talk a bit about the possibility—I suppose you are going through the process right now of looking at the possibility of doing something over in London.

Perhaps you could tell us just a little bit about that so we have it on the record that you are looking into the process—I know your regents have talked about it a bit—and whether or not you think that is something that is a good idea.

I mean, we have got sort of deferred maintenance on some of these other facilities. Should we be doing that? What is the reason for that, et cetera?

Mr. HORVATH. Certainly. As you might imagine, we are presented with opportunities on a regular basis to do interesting things. This opportunity in London was presented to us by the Mayor of London about a year or so ago.

His vision in the redevelopment of the facility that housed the 2012 summer games includes the creation of a cultural and educational quarter that would be populated with a number of cultural and education institutions, and his desire was to have the Smithsonian be part of that. It is an interesting idea. It certainly is interesting to think about doing something in the land of Smithson.

And early on we considered it and went back to them with a certain set of criteria. First, we would need a significant amount of financial support in order to do this. Secondly, we would not ask Congress for any additional funding to support this; so, it would have to be something that would be supported by private funding. And we would have to be sure that it fit within the mission of the Smithsonian.

I think we were able to satisfy ourselves on the "mission-centricity" of it. We are a very global entity already. A lot of that international work is focused on scientific research. This would be the first opportunity for the Smithsonian to be able to tell the story of America abroad. So it has a tremendous amount of appeal in that way.

We indicated that we would need to have space provided to us. We could not raise funding for that. And the Mayor and his team have identified a significant amount of private support that would enable that to happen.

And the final piece of the assessment that we are in the midst of right now is really looking at the financial model that we would need to implement and whether it would be able to sustain us for a long period of time.

So we are still in the investigative phase. We are excited about the prospect. We haven't made a final decision. And, as you might imagine, we have been in close contact with Dr. Skorton to ensure that his input is part of the overall process and that he feels comfortable with the progress or decisions that we are making along the way.

The CHAIRMAN. Thank you very much for that. We will want to be kept in the information loop as that process goes forward certainly, but I think that is a very interesting idea.

Without objection, I would say that all members will have 5 legislative days to submit to the chair additional written questions for the witness, which we will forward and ask the witness to respond as promptly as they can so that those answers might be made part of the record.

We certainly appreciate your attendance here today and appreciate your continuing service at the Smithsonian. We want to thank, as Mr. Davis said, all of the employees of the Smithsonian, some of who are here today.

You have a tremendous group of dedicated and committed individuals that really, really make it all happen there. So we certainly appreciate their service as well.

Without objection, the hearing is adjourned.

[Whereupon, at 11:20 a.m., the Committee was adjourned.]

Smithsonian Institution

Questions for the Record

Committee on House Administration Hearing of June 17, 2015

"The State of the Smithsonian"

1. **Does the Smithsonian have a public position on the creation of a potential Museum of the American Latino, and, if Congress were to authorize it, could the Smithsonian absorb the work involved for the project?**

   The Smithsonian has focused in recent years on improving our ability to tell the story of Latinos' significant contributions to this country, with many new exhibits and programs, leveraging resources, knowledge, and space across the Smithsonian Institution, including the creation of new curatorial positions. While the Smithsonian has not taken a position regarding the creation of additional museums, we would note that Federal support would be critical to successfully create any new museum.

   In our experience, Federal support and funding is critical in order to raise private funds. For example, raising half of the $540 million necessary to build the National Museum of African American History and Culture (NMAAHC) has proven to be challenging, though we are making good progress and expect to raise the necessary private funds by the time the museum opens in the Fall of 2016. If Congress had not provided half of the estimated costs for NMAAHC, we would have found it nearly impossible to raise the private funds we have to-date, and the museum would not now be going up on the National Mall. Additionally, Federal funds are necessary to support the annual operations and maintenance costs of the museum, estimated to be in the tens of millions of dollars. Operation and maintenance costs are traditionally funded by Federal funding.

2. **Should a potential Latino Museum receive Federal funds?**

   For nearly 170 years, the largest single source of income for the Smithsonian has been funds appropriated by the Congress in accordance with normal budget and appropriations procedures. These funds have been appropriated by the Congress at the request and with the approval of the Regents to do work which could not be accomplished without federal support. Examples include the care and preservation of the national collections and to maintain the highest quality of research and scholarship as the basis for all our work. A potential National Latino Museum would have the same requirements for federal support.

   Regardless of whether a proposed Latino Museum would be part of the Smithsonian Institution, or an independent national museum like the Holocaust Memorial Museum or the National Gallery of Art, the longstanding precedent is that such a museum should receive federal funds. If the museum is authorized by law, Congress should provide appropriations for the planning, design, and construction of the building and the land, if

required. In addition, appropriations should be provided for research, exhibition, and public programs and administrative support and security for operations and maintenance of the physical infrastructure. Like the existing national museums, and other great public institutions throughout the country, the proposed Latino Museum should also have at its disposal funds that are generated by business enterprise activities, philanthropy, and interest earned on endowments raised by the museum.

3. **What effect has sequestration had on Smithsonian operations over the last few years?**

The sequestration reduction of $41 million in FY 2013 was difficult to manage. Actions taken in FY 2013 included imposing a hiring freeze and not back-filling critical curatorial and staff positions; reducing Institution-wide programmatic investments for research, education, and outreach; and reducing travel and staff training. The sequester also hit areas in our budget that are high priorities, such as facilities revitalization, facilities maintenance, and collections care.

Sequestration deferred critical infrastructure projects at the National Zoological Park and the National Museum of Natural History, as well as repairs to damage resulting from the 2011 earthquake at the National Air and Space Museum and the Museum Support Center. The Institution also reduced planned maintenance projects at several museums. Failure to conduct planned maintenance causes our equipment to decline faster than it should and cost more to fix later. The lack of funding from sequestration also impaired the Institution's ability to address specific deficiencies in collections management and limited the replacement of obsolete cabinetry that houses collections.

The lack of funding for contract security services resulted in the closing of some galleries, thereby diminishing the quality of the visitor experience. In addition, there was a reduction in educational programs that impacted thousands of students visiting our museums in Washington, DC and in New York City. Also, the reduced funding resulted in the cancellation of valuable educational resources to tens of thousands of teachers and students.

4. **During your time as Acting Secretary, were you able to make additional progress on the possible London exhibition at the former Olympic Park site? How appropriate is it for the Smithsonian to be using resources, even if from trust funds rather than Federal funds, on a foreign venue?**

As noted, considerable progress was made in the past six months in better understanding the benefits and risks associated with a potential Smithsonian program space in London. It is important to note that a final decision on moving forward has not yet been made.

When the opportunity was first presented in Spring of 2014, the Smithsonian established three conditions that would need to be met in order to consider moving ahead.

a. The Smithsonian could not raise capital funds toward the construction and fit out of the space; the London sponsors would need to secure such funding to provide the capital funding for such space.
b. The Smithsonian would not request additional appropriated funds to support this operation. It would need to be supported through private funds alone.
c. Any funds raised to support the Smithsonian's activity in London would need to come from donors not currently supporting other programs at one of our museums, research units or educational initiatives.

5. **How does the Smithsonian plan to fund initiatives such as the South Campus revitalization and an expansion in London when you currently have large unfunded needs, such as collections space and deferred maintenance?**

South Mall Campus Master Plan

A master plan's purpose in settings such as the Smithsonian is to identify both maximum development potential as well as recommended development based on current needs and a reasonable projected program of use. The goal is to create an integrated plan for the whole, developing a physical plan that responds to an organization's strategic organizational planning so that elements such as utilities, pedestrian and vehicle circulation, compatible uses and areas for potential renovation and expansion can be looked at as a whole and projects identified for implementation in a logical, efficient manner. This should result in a more cost-effective use of resources, better design and more efficient operations.

The South Campus Master Plan was undertaken in recognition of the significant investments that need to be made in the facilities encompassed by the plan—Freer Gallery, Ripley Center (including the Sackler Gallery and National Museum of African Art), Castle, Arts & Industries Building, and Hirshhorn Museum and Sculpture Garden. The plan is a strategy to think holistically about how to address significant deferred maintenance challenges and necessary building upgrades, while at the same time providing an opportunity to make enhancements for visitors and improved support for educational and public programming. The majority of the work contemplated by the master plan has been identified by our long term capital planning process. Funding for projects included in the scope of the master plan will come from a mix of Federal capital and private funding. It is anticipated that the full implementation of all of the projects would span 20 or more years and a major goal would be reduction of deferred maintenance in these important facilities.

London

A condition of our participation in the London facility is that capital costs for space that the Smithsonian would occupy must be supported through funding raised by LLDC, the development entity, from sources other than current Smithsonian donors. Additionally, the operation would need to be self-supporting, without reliance on appropriated funds.

The current assessment of this opportunity is focused on determination of a business plan that would support such an operation.

6. **Are any special events being planned to coincide with the formal opening of the National African American Museum next year?**

The current plan is to celebrate the completion of the construction project in November 2015 with a three-day art installation involving images projected on the building's façade that commemorate the significant civil rights anniversaries of that year, such as the 50th anniversary of the Voting Rights Act, the 150th anniversary of ratification of the Thirteenth Amendment abolishing slavery, and the 150th anniversary of the end of the Civil War. A formal dedication of the museum will occur in the Fall of 2016. Almost all Smithsonian museums and programs are planning concurrent activities during the Fall of 2016 to coincide with the dedication and highlight relationships with African American history and culture as part of the American experience and its global connections.

7. **How can the Smithsonian better promote awareness of its scientific research programs, which may not be as well known to the public who consider it a series of museums or still "The Nation's Attic"?**

While the Smithsonian has great scientists asking critical questions about the earth, sea and sky, much of the public remains unaware of the diverse work we do and the impact we make in the world. We are keen to raise the profile of our scientific research programs to audiences of all types, especially the general public and the next generation of inquisitive minds. Last year, 30 million visits were made to our science museums and the National Zoo. For the millions more who could not visit, we are doing more than ever to reach them through our traveling exhibition service, our 204 affiliate museums, and digital technology.

To close the gap, the Smithsonian diligently works to promote science and its relevancy to the public. We use a wide range of social media platforms to engage audiences around the globe — attracting more than three million Twitter followers, and approaching four million Facebook fans. Smithsonian scientists have created more than 35 mobile apps, such as Leafsnap, that enable users to identify and continuously learn about the world around them.

Our traditional media, including the Smithsonian magazine and the Smithsonian Channel, also push our research stories and scientific discoveries into the public domain, demonstrating the active passion of our scientists. We strive to educate and share connections between Smithsonian science and issues of public concern, such as human activities that have had a significant global impact on the Earth's ecosystems, wildlife trafficking, combating ivory poaching, and establishing the link between the potentially deadly Middle East Respiratory Syndrome (MERS), a viral respiratory illness which impacts humans, and a strain of MERS found in camels.

The Smithsonian strives to offer education beyond the classroom walls for continuous learners of all ages. Learning labs such as Q?rius at the National Museum of Natural History, which links science to everyday life, are key to showcasing the relevance of science to all citizens. Smithsonian science museums, and central education offices, regularly engage in non-formal STEAM education efforts. The Smithsonian Science Education Center develops exemplary science instructional materials with the goal to transform the learning and teaching of science for all students in the United States and throughout the world.

Smithsonian Research Online offers a digital reference for all Smithsonian publications, and we are working to make published results of federally funded research freely available to the public within one year of publication, and requiring researchers to better account for and manage the digital data resulting from federally funded scientific research — in voluntary alignment with the Office of Science and Technology Policy public access policy. The Smithsonian works with a variety of federal partners such as NSF, NOAA, NASA and the Department of Education, and with private entities and universities to cultivate interest in and access to science.

The Smithsonian makes conscious recruiting efforts intended to diversify the traditional face of science. More than 40 different initiatives are aimed at encouraging men, women and girls of color and/or economic disadvantage to pursue professional careers in STEAM and creative fields in museums. Last year, the Smithsonian welcomed 725 fellows from 54 countries and 41 U.S. states, and more than 1,600 interns from 52 countries and 48 U.S. states. These academic appointments not only encourage interest and awareness of Smithsonian scientific research, they continuously expand the Smithsonian audience and collaborative network by attracting the next generation of talented scientists and lifelong learners.

8. **This is related to the ongoing controversy surrounding Dr. Willie Soon and research related to climate change. Why are certain Smithsonian staff funded largely by private donors, and how does the identity of the donor or the subject matter being studied affect whether the Smithsonian will employ that person?**

The Smithsonian employs both federal and Trust funded staff. Dr. Soon holds a Trust appointment with the Smithsonian Astrophysical Observatory (SAO) where the majority of Trust staff are funded through contracts and grants from NASA, NSF and other government sources. A small number of SI and SAO Trust staff are funded either through grants from private foundations or other non-government sources, or from endowments or gifts from private donors. The Smithsonian permits its scholars to seek funding for such private and/or non-government sources in order to allow for the maximum range of opportunities to raise funds for research. Such funds complement the Smithsonian's appropriated funds, and those funds provided through government contracts and grants, that are used for research.

Smithsonian Trust scholars may request funds to conduct research or other scholarly activities, including coverage of salary, so long as proposals are submitted in accordance with Smithsonian policy. Smithsonian policy ensures that the individual scholar does not contact a private donor or foundation without coordination with the Office of Advancement and/or Office of Sponsored Projects, that proposals are submitted through these offices, that the proposed scope of work is aligned with the mission of the Smithsonian, and that the terms and conditions of the award or gift are reviewed and accepted by the Office of Advancement and/or Office of Sponsored Projects, as appropriate. The terms and conditions of the grant, contract or gift must ensure that the sponsor or donor has no role in the conduct of the scholarly activity.

In following Smithsonian policy, the identity of the sponsor or donor has no bearing on whether a scholar is employed at the Institution. Similarly, by policy a scholar may only request funds to conduct research on subject matter that is aligned with the Smithsonian mission. Continued employment as a Smithsonian scholar is dependent on maintaining a satisfactory or better performance level as determined by annual and periodic scientific performance reviews, and by the availability of funds to pay for the scholar's salary.

9. What is your position on charging admission fees to Smithsonian museums and other facilities?

The issue of admission fees is discussed by the Regents every few years. Each time, after weighing the pros and cons, they have concluded that charging admission would impede our ability to fulfill our mission. In order to cover the costs of collecting the fee, such as equipment and staff, we would have to charge a significant fee, perhaps as much as $10 per person. That would pose a significant barrier to many of the audiences are trying hardest to reach – families with young children and those with little or no other access to the museum experience. In addition, the American taxpayer has already "paid," in a sense, through the generous support provided to the Smithsonian by the federal government.

10. What are the Smithsonian's key information security risks and what are you doing to address them? What more needs to be done to prevent hacking and other IT vulnerabilities?

The Smithsonian holds itself to a high standard in managing and protecting the cultural, scientific, and information resources with which the Institution has been entrusted. The Institution also relies heavily on its reputation to draw customers, obtain donations, attract volunteers, and build collaboration with partners, which is of paramount importance to the success of the Smithsonian mission.

The greatest information security risks are those that would:

- damage the data and systems needed to preserve, protect, and manage the collections and research assets

- expose the information entrusted to us by our donors, customers, and collaborators (e.g. personally identifiable information, payment card data, anonymous donations)
- significantly disrupt the operations of the Institution, especially public-facing services
- violate intellectual property rights and other agreements
- otherwise promote a poor image of the Smithsonian (e.g. web site defacement, hijacking social media or email accounts)

The Smithsonian has an information security program based on both government and industry best practices. We employ multiple layers of defense including perimeter protections, network segmentation, malware prevention, vulnerability management, and monitoring. The Institution also has a robust PCI compliance program to protect its retail and donation transactions. Additionally, the Smithsonian has documented security policies, an incident response team, a security training and awareness program, and System Assessment and Authorization processes based on NIST standards.

The Smithsonian continuously assesses security risks and implements enhancements to mitigate them. We have a security program plan which provides strategic direction for the many security program initiatives currently underway. However the speed at which these projects can proceed is limited by availability of resources.

The major security improvement areas we are focused on are:

- Eliminating the use of vulnerable obsolete software and increasing the speed of vulnerability remediation
- Enhancing continuous monitoring capabilities
- Ensuring that all of the Smithsonian's systems, including those of third party providers, are sufficiently included in our risk management processes, and automating these processes to improve efficiency
- Further building of security awareness in our staff and affiliated personnel
- Refining our security architecture as we replace the many network security technologies that are due to reach end of life over the next few years

11. How desirable is it for the Smithsonian to participate in animal breeding and research programs which might result in attempts to reintroduce endangered species back into the wild if threats based on habitat loss, poaching, etc., can't be contained?

The Smithsonian is committed to understanding and sustaining a biodiverse planet. The National Zoo and the Smithsonian Conservation Biology Institute (SCBI) lead the Smithsonian's efforts to help conserve species that are threatened by extinction. Our scientists conduct conservation-related research and breeding programs for some of the world's rarest species and work to train the next generation of conservation leaders. SCBI's 3,200-acre Front Royal Campus is an especially unique and valuable asset characterized by highly specialized facilities for reproducing difficult-to-breed species

with distinctive needs, especially those requiring large areas, natural group sizes and minimal public disturbance.

While it is true that SCBI cannot control all of the factors that may lead to species becoming endangered or even extirpated from the wild, we are leaders in sustaining the living biodiversity in human care. The new knowledge we generate is critical for reducing threats to wild populations and contributing to species' recovery. We prioritize our conservation research and breeding activities based on (1) species that do not reproduce well in typical urban zoo environments, (2) the need for new scientific knowledge to better understand, insure and protect bio- and genetic diversity, including by collecting and freeze-storing gametes, embryos and DNA, and (3) supporting national and international agencies that require assistance for breeding and reintroduction.

Among the many species that have benefited from our science are the Przewalski's horse, maned wolf, cheetah, clouded leopard, Guam rail and Bali mynah. The SCBI Front Royal facility was the first ever to naturally propagate the South Pacific honeycreeper as well as the Eld's deer, scimitar-horned oryx and Przewalski's horse by artificial insemination. Research and breeding have contributed to the successful return of the Guam rail and oryx to the wild through reintroduction. SCBI also has produced more than 650 black-footed ferret offspring (a species once believed to be extinct), helping to ensure the presence of more than 350 ferrets living and thriving in nature in the Great American West. Besides the successes occurring at the Zoo and Front Royal, the Smithsonian helps save species all over the world, ranging from the iconic giant panda in China to operating a Panamanian Amphibian Rescue Center for frogs devastated by a disease epidemic. Our scientists are also leading efforts to conserve Asian elephants, which are threatened with extinction throughout their range in South and Southeast Asia. We conduct research on the health and reproduction of Asian elephants in North American zoos, but also with partners in Malaysia, India, Myanmar, Sri Lanka, and Thailand on ways to increase the health and welfare of captive elephant populations, undertaking research and training programs, and determining their home range needs and movements in the wild. These studies are helping wildlife managers in those countries to reduce threats and ensure the long-term sustainability of the species in the wild.

SCBI can never successfully undertake reintroduction of species on its own, or manage wild populations; those actions depend on decisions made by wildlife and land-managing agencies in the United States and in other countries. However, SCBI can help to preserve captive populations and their genetic diversity, substantially contribute to reducing threats to wild populations, and play key roles in reestablishing wild populations of species that have disappeared from their native habitats.

12. Should the Smithsonian Conservation Biology Institute in Front Royal, Virginia, be open to the public on a more regular basis than once a year? What changes would you have to make to accommodate greater public access? What would be the costs?

In view of today's federal budget constraints, SCBI has been careful to stay focused on its core mission of conducting research and conservation breeding programs to help conserve endangered species and to train the next generation of conservation leaders. Maintaining and enhancing the unique facilities on its 3200-acre campus must be SCBI's first priority. These facilities include:

- State-of-the-art animal research and breeding facilities, barns, and fenced pastures
- Reproductive physiology laboratories
- Fully-equipped veterinary hospital
- Administrative buildings, animal care staff facilities and intern dormitories
- Eastern deciduous forests (2,000-acres) that are home to the National Ecological Observatory Network (NEON), core site for the Mid-Atlantic Domain, the Smithsonian's Forest Global Earth Observatory, and other long-term forest research study sites.
- Smithsonian-Mason School of Conservation (SMSC) academic, lodging and dining facilities.

Because of the need to ensure the safety and security of these specialized facilities, the animals in its collection, and the students who study there, SCBI's capacity for increased public visitation is constrained. While SCBI hosts approximately 3,000 visitors over its annual Autumn Conservation Festival weekend, an additional 5,000 visitors are hosted each year as part of specialized guided and other special events, including a public lecture series.

Consistent with SCBI's long-term facilities Master Plan and the Smithsonian's Capital Campaign, we are focused on raising private sector support to build modest new animal science and breeding facilities as part of our Slate Hill Conservation Area. These facilities will support research, breeding and animal care programs for endangered canine species (Asiatic dhole, African wild dogs, maned wolves and red wolves), small carnivores (black-footed ferrets, small endangered cat species, etc.), hoof stock species (endangered horse species, antelopes etc.) and cheetah. We are also incorporating strategies designed to make this area more accessible for driving tours that would allow visitors to view animals with minimal disturbance to research and breeding programs.

Major increases in public access to SCBI would require substantial new investments, including both capital improvements and additional staffing. At a minimum new required facilities would include:

- Completion of the planned Slate Hill Conservation Area improvements (including utilities and road infrastructure)
- Visitor Center, with additional police assigned to control and monitor public access points
- Restricted visitor-access roads to lead visitors to viewing areas, which would need to be completely separated from access roads that lead authorized staff to non-public areas
- Signage and interpretive materials designed to educate visitors about SCBI's purpose and programs

- Other needed amenities might include picnic areas, hiking/walking trails, public toilets, interpretive kiosks etc.

Additional security, animal care, maintenance and educational/tour guides would also be required to support increased visitors at SCBI.

Because of the constrained budget climate and the need to be extremely prudent in husbanding its existing financial and human resources, SCBI has not undertaken a formal process to estimate what the costs of these improvements and additional staffing needs might be.

13. What strategies is the Smithsonian pursuing to reduce deferred maintenance? How will the Smithsonian approach deferred maintenance projects if it does not receive the full funding request for maintenance?

Deferred maintenance has grown over the past several years at the Smithsonian as buildings have aged, square footage has been added, and maintenance and capital funding have not kept pace with the accumulating needs. As has been the case, these issues are addressed in the following ways:

- Federal maintenance and capital funding are deployed in a strategic fashion, to address the most serious and pressing needs based upon our continuous assessments of facility condition. The desired result is to maximize the impact of projects, recognizing that funding levels are not sufficient to keep deferred maintenance from growing. Major capital investments in the past few years in American History Museum, Natural History Museum and National Zoo, for example, have been in response to some of our most significant facility needs.
- The use of preventive maintenance strategies has expanded, to the degree financially feasible, to extend the useful lives of significant building components such as roofs, mechanical systems, and vertical transportation. More could be done in this regard with enhanced maintenance funding.
- Some facilities will need to be closed for an extended period to enable renovation work to address facility needs, such as the Renwick Gallery which is currently under construction, and the Freer Gallery which will close in January 2016 for over a year.

The Smithsonian will continue to make the case for Federal maintenance and facilities capital funding in line with industry standards for operations of our size, complexity and age of buildings. Recognizing the challenges being faced with the Federal budget overall, we will continue to approach investments in our buildings as strategically as possible, and focus on the most pressing of problems. Specifically, our approach will be to:

1) Review and plan for a loss of functionality and/or operability in facilities with significant impact to users and program.

2) Plan for greater spending of already limited maintenance and redirected capital funds for emergency repairs (reactive maintenance rather than preventive maintenance).
3) Review the combined capital and maintenance five year plans and plan for cost growth of future projects due to scope increase and escalation.
4) Review operations plans to better prepare for increased risk of facility and system failures, which can result in building shut-downs, evacuation of public and staff, damage to collections, impacts to safety and security, and loss of revenue.
5) Reduce design funding and reprioritize towards emergency repair projects. In the long run, without this ability to keep project design progress (2 years in advance) at pace with the growing backlog of delayed/deferred revitalization, our DM backlog will increase even further.

14. How would you describe the current state of the Smithsonian facilities overall? Is this assessment based on recognized industry or federal government standards?

The majority of the Smithsonian's 640 buildings and underground utilities are rated fair to poor using the Facility Condition Assessment (FCA) System, with an average across all facilties of 88.4%. FCA is a recognized industry and federal government standard and is a parametric cost estimating model developed by Department of Defense in the mid-2000's, and adapted by other federal agencies such as NASA and the Department of State. Similar systems are also followed by private and public agencies such as college campuses and local governments. The method used by the Smithsonian to arrive at facilities condition has been reviewed and confirmed by NAPA, *Museum and Facilities Critical Assessment and Improvement Objectives*, 2001; GAO, *SI Funding Challenges Affect Facilities Conditions and Security*, 2005; GAO, *Facilities Management Reorganization is Progressing but Funding Remains a Challenge*, 2007. The data gathered helps to inform the prioritization of maintenance and renovation investments to the issues of greatest need.

15. Can you elaborate on the "South Campus Master Plan" and how it impacts Smithsonian planning? How will the $2 billion projected cost affect the deferred maintenance backlog? What portion of the plan do you envision funded with federal appropriations?

The South Mall Campus includes the museums and gardens between 12th Street and 7th Street, south of the National Mall and north of Independence Avenue, including the Freer Gallery of Art, the Quadrangle Building, the Castle, the Arts and Industries Building (AIB), the Hirshhorn Museum and Sculpture Garden and the Haupt, Ripley and Folger gardens.

A master plan's purpose in settings such as the Smithsonian is to identify both maximum development potential as well as recommended development based on current needs and a reasonable projected program of use. The goal is to create an integrated plan for the whole, developing a physical plan that responds to an organization's strategic

organizational planning so that elements such as utilities, pedestrian and vehicle circulation, compatible uses and areas for potential renovation and expansion can be looked at as a whole and projects identified for implementation in a logical, efficient manner. This should result in a more cost-effective use of resources, better design and more efficient operations.

The existing need to replace aging building systems that have reached the end of their lifespan was the genesis for developing a South Campus Master Plan. The required construction created an opportunity to consider potential efficiencies through shared services and utilities. While addressing those pressing needs, we have looked for ways to also improve our facilities for visitor services, education and museum programs, including creating clear entrances and connections between the museums and gardens. This need to make major improvements and repairs – including better seismic reinforcement of the Castle and replacement of the membrane roof of the Quadrangle Building beneath the Haupt Garden – also offered the opportunity to better serve visitors and staff with facilities in alignment to the Smithsonian's Strategic Plan which emphasizes and supports increased interdisciplinary connections among the public and research programs of its 19 museums and 9 research centers. The project also enables the Smithsonian to centralize utilities and loading to reduce operating costs and improve energy performance.

The current estimate for cost is approximately $2 billion, projected over approximately 20 years (through FY 2034). Note that none of these projects has been designed and therefore estimates may change. As projects are developed and scheduled and the permanent program for AIB is identified, this number will continue to be refined. The projects identified in the South Mall Campus Plan are planned to be funded by a mix of federal and private funds. Every one of these revitalization projects will reduce long term maintenance costs and greatly reduce or remove deferred maintenance projects for each facility. The federal components will continue to be identified in the Smithsonian's five-year capital plan requests and will typically represent revitalization of infrastructure such as the major restoration of the Castle and its building systems and the revitalization of the Quadrangle Building whose systems and roof membrane (under the Haupt Garden) are approaching the end of their useful lives. Many of our most pressing needs are in this area of the campus. This campus area includes the Castle whose complete revitalization is a high priority due to the poor condition of its building systems and envelope and our intention to restore its historic integrity and return more of its major spaces to public use. The Castle restoration and construction of an efficient central plant and centralized loading drive and docks for the Castle and campus represents nearly one-third of the scope of the effort included in the Master Plan. The Quadrangle Building and Hirshhorn Museum and Sculpture Garden, buildings and gardens constructed in the 1970s – 80s, have building systems that have reached the end of their useful lives and exterior envelopes that have aged to the point of requiring major renovations rather than patching of leaks and damage here and there. In addition, we want to identify ways to make these envelope and building system improvements more energy efficient and better at maintaining the constant environmental conditions needed to best care for our collections. While the AIB's exterior has undergone a complete revitalization, its interior

fit-out for a permanent use, a central utility plant, and the utility and loading services to support it would be implemented within the framework established by this master plan.

16. What progress has been made in the digitization of the Smithsonian's collections since the Committee's oversight hearing last Congress?

Based on our FY 2014 digitization assessment, the Smithsonian is targeting 13 million collection objects and specimens for digitization, and has standard digital images for 15% of that priority collection. This represents a 3% increase over the 12% reported during the last CHA hearing on collections stewardship (2013). In FY 2015, ongoing projects managed by the central Digitization Program Office alone (as opposed to specific museum projects) have created digital images for more than 325,000 collection objects, or an additional 2.5% of progress, that will be enumerated in the FY 2015 assessment.

Is the pace of digitization keeping up with collections growth?

Based on 25 years of acquisition data, the annual collections growth rate for Smithsonian museum collections is 0.3%. The average pace of digitization against our priority collection, extrapolated from three years of reported data (FY 2012-2014), is over 1.0%, and gaining momentum, efficiency, and cost effectiveness. Most Smithsonian museums include digitization of routine incoming objects and specimens as part of their normal collections workflow. However, when large collections are acquired by donation, transfer from a federal agency, or absorption of an "orphaned" collection, the museum may not have the resources to immediately digitize it.

Have you identified technical processes that can help speed the rate of digitization?

The Digitization Program Office is conducting an ongoing series of rapid capture pilots demonstrating how various types of collections objects can be digitized rapidly and cost effectively. These pilots have been conducted in seven museums to date. They demonstrate operational models for digitizing collections systematically at scale through various systems integrations and innovations, combined with commercially available capture technologies. In FY 2015, these pilots were expanded into the first two large-scale production projects:

- At the National Museum of American History, the Smithsonian deployed a conveyor belt-based system to digitize 270,000 currency (and other) proof sheets from the Bureau of Engraving and Printing collection. Historically, this collection

was digitized using a flat-bed scanner, with projected time-to-completion of 20 years. The first U.S. implementation of the conveyor digitized the entire collection in just 6 months. In Fall 2015, the same system will be used to digitize 500,000 of 5 million botany sheets at the National Museum of Natural History.

- The Smithsonian started digitization of the entire 210,000 object collection at the Cooper Hewitt Smithsonian Design Museum in late 2014. Through a dedicated digitization workforce, back-end systems integration, deployment of barcoding and other workflow innovations, this project has digitized 40,000 collections objects (from vases to couches) in a little over 6 months. For comparison, the complete Freer-Sackler collection of 40,000 objects (announced in December 2014) was digitized in an ad-hoc manner over the span of 15 years.

Has the Smithsonian been successful at raising private funds to support digitization efforts?

In general, corporations, foundations, and private individuals continue to shift their interest away from the infrastructure investment of funding digitization to supporting educational experiences based on digitized collections. A notable recent exception has been the significant digitization funding made possible by a board member at the Cooper Hewitt Smithsonian Design Museum. The Smithsonian has been more successful in gaining corporate support, particularly in-kind support, for its cutting-edge 3D digitization pilot, such as the donation of web-infrastructure to display 3D data online at http://3d.si.edu/. Fundraising efforts supplement federal funding, but at present, privately raised funds cannot support sustained, large-scale (and therefore cost-effective) digitization commensurate with the Smithsonian's goal of digitizing 13 million collection objects and specimens.

17. Recently, the Smithsonian issued its "Collections Space Framework Plan." The study found that 47% of collections storage space is considered "unacceptable." Please elaborate on the Smithsonian's short and long term plans to address this finding particularly if funding constraints exist.

The Collections Space Framework Plan is the culmination of a multi-year Institution-wide collections space planning initiative to document, analyze, and plan for addressing our current and future collections space needs in an efficient and strategic way. As part of this initiative, the Smithsonian completed a survey of existing collections space. The survey provided a snapshot of current collections space conditions across the Institution and characterized the quality of collections space, storage equipment, accessibility, environmental conditions, security, and fire safety. The first-of-its kind assessment of over 2.1 million square feet of collections space (18% of total Smithsonian building space) evaluated 1,800 locations at more than 35 properties and 90 buildings. An index considering building construction, environmental conditions, fire safety, security and

collections storage equipment found 34% of Smithsonian space optimal, 19% acceptable, and 47% unacceptable. Due to deterioration and insufficient construction for long term storage, a majority of the unacceptable space can be attributed to two facilities at the Paul E. Garber facility in Suitland, MD. Most of the remaining problem areas are in the National Museum of Natural History as a result of outdated cabinetry and overcrowding. By focusing resources on these locations, the Smithsonian can resolve its most pressing collection storage issues.

Findings from the Collections Space Framework Plan are integrated into the Facilities Capital Plan. The plan informs budget priorities and current recommended near-, intermediate-, and long-term strategies for addressing the "unacceptable" collections space. Remediation plans include renovation of existing space, and new construction to decompress overcrowded collections space conditions, allow for future collections growth, and reduce reliance on lease space for collections storage. The Collections Space Framework Plan outlines the Smithsonian's Facilities Capital projects and associated budget costs for 'existing building' prototype renovations at American History, the addition of an adjacent building to the Udvar-Hazy Center in Dulles, Virginia, and new construction in the form of conceptual design prototypes at Suitland, Maryland and Dulles — all prioritized by need and location.

This 30-year implementation plan was based on a Smithsonian Facilities Capital program of $200 million per year with $20-30 million dedicated to collections space projects. Additional non-federal funding is also included, with a study currently underway to help identify alternate funding options.

Targeted funding however, also enables us to incrementally correct unacceptable existing collections space conditions at specific units where a single category — such as storage equipment, security, or fire protection — is the sole deficiency factor.

18. Can you elaborate on the Smithsonian's collections acquisition strategy? Does the Smithsonian assess its ability to store, preserve and maintain a proposed acquisition prior to acceptance? Are there instances where items are accepted when insufficient storage has been identified?

The acquisition of collections is fundamental and critical to the vitality and mission of the Smithsonian — acquiring collection items by a variety of methods, including gift, bequest, purchase, exchange, transfer, and field collecting. At the National Zoo and Smithsonian Gardens, we also acquire collections by birth and propagation. In some cases, we have a Congressional mandate to collect objects beginning with our enabling legislation that clearly calls for the transfer of collections belonging to United States to the Smithsonian. More recently, in 2002, Congress designated the National Museum of American History as the official repository for September 11, 2001 materials so that objects, photographs, and documents would be preserved in the museum's collections to help future generations of scholars and visitors to comprehend the horrific events, their roots and their long-term consequences. Another form of Congressional mandate comes

in the form of instructions to build new museums, such as the National Museum of African History and Culture, which has collected more than 30,000 objects requiring additional collections storage space.

The Smithsonian has never considered collections to be static. Collections must and do continuously grow to support the Smithsonian's mission and programmatic goals. Ever-evolving collections ensure the ability of the Smithsonian to tell and share our nation's continuing story in all its dimensions – across history, art, science, culture, and time. Collections contribute to global innovation and document the world's ever-changing cultural and scientific heritage from one generation to the next. For example, one current goal is to acquire collections—historical artifacts, artworks, archival documents— that document the Latino or Hispanic experience as part of the American fabric.

The Smithsonian strives for responsible, disciplined acquisition of collections based on stringent acquisition evaluation criteria. In order to provide responsible management of the collections, potential acquisitions undergo a rigorous selection and review process. The following criteria are considered during the review and evaluation of potential acquisitions:

- consistency with the collecting unit's mission, programmatic goals, and collections plan
- quality, physical condition, intellectual value, and significance
- documentation of legal title and provenance
- restrictions on use
- size, volume, and quantity
- potential for use in exhibition, education, and research
- strict adherence to professional standards and all applicable laws and regulations relating to the acquisition
- the ability and costs to provide appropriate management, care, and accessibility, including documentation, conservation, long-term preservation, digitization, and storage.

Because of this rigorous selection process, the Smithsonian acquires only a small percentage of what may be offered.

Planning future collections growth and the resulting anticipated storage needs is a challenge, and sometimes nearly impossible, because each collection is unique. Likewise, past growth does not consistently indicate future growth rates as acquisitions often occur in surges rather than at a steady rate. Unpredictable patterns of growth often occur because of history-making events that need to be documented, such as the decommissioning of the Space Shuttle program or the authorization of new Smithsonian museums, as well as unique collecting opportunities, sizable donations and transfers of collections items, and the development of new collecting initiatives.

Collections also vary in size and type — from the smallest insect to the Space Shuttle, from paintings to frozen tissue specimens — profoundly affecting collections space requirements. Unanticipated acquisitions have often contributed to overcrowded

collections storage conditions and reliance on leased collections space. Being mindful of our ever-growing collection and guidelines for sound collections management, the Collections Space Framework Plan guides our planning to address current and future collections space needs and ensure the Institution never turns away collections that deserve to be at the Smithsonian.

19. Do you foresee major risks for the Smithsonian with the London proposal and if so, have you identified ways to sufficiently mitigate them?

The London proposal is still under study with no final decision having been made. The major risks that are being studied at this stage are financial, and these would be addressed by a business plan and funding strategy. Other types of business and operating risks will be analyzed as legal documents are assembled and in consultation with our external counsel.