Grant Request Prepared for
The John and Jane Smith Foundation

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Our Mission

The mission of the California Science Center is to stimulate curiosity and inspire science learning in everyone by creating fun, memorable experiences, because we value science as an indispensable tool for understanding our world, accessibility and inclusiveness, and enriching people's lives.

I. Summary

The California Science Center continues to advance a bold project that will take science learning in Los Angeles to new heights and create an iconic destination for the region. Since the arrival of space shuttle Endeavour in 2012, millions of people have come to the Science Center to be inspired by this national treasure. The Samuel Oschin Air and Space Center, the major expansion that will be Endeavour's permanent home, will be a one-of-a-kind destination for inspiring the next generation of STEM (science, technology, engineering and math) professionals as well as innovators, explorers and dreamers of all ages. It is also one of the most significant educational and civic projects in Southern California, shown by the worldwide attention it has garnered at every major milestone, from the award of Endeavour in a national competition in April 2011 to the May 2016 arrival of ET-94, the last remaining flight-qualified space shuttle External Tank.

We are tremendously grateful to the John and Jane Smith Foundation for your crucial role as one of the earliest contributors to the EndeavourLA Campaign, supporting Endeavour's decommissioning, transport and temporary display. We also deeply appreciate your support of the design stage of the Samuel Oschin Air and Space Center, during which we honed our vision for this state-of-the-art learning resource, which is the centerpiece of Phase III of the Science Center's 25-year Master Plan. Projected to open in 2019, the expansion will integrate our signature hands-on educational exhibits and programs that encourage active learning through discovery with a diverse collection of aircraft and spacecraft, including Endeavour in launch position.

Currently, we are at a critical stage in the project. With construction documents prepared and finalized, we need to secure $85-$100 million in new EndeavourLA Campaign pledges in order to break ground on the Samuel Oschin Air and Space Center. This is a big undertaking, but we firmly believe that we can achieve this goal within our current fiscal year if the California Science Center Foundation's board leadership and our closest friends make extraordinary commitments to this worthwhile cause. For this reason, **the California Science Center Foundation respectfully requests the John and Jane Smith Foundation's consideration of a $7 million grant in support of the EndeavourLA Campaign, which will provide crucial funding to help launch us into the construction stage for the Samuel Oschin Air and Space Center and sustain ongoing programs and operations.** A pledge of this scale, payable over three to five years, would bring the Smith Foundation's cumulative giving to the project to $10 million, sending a tremendous signal to others in the philanthropic community, including three other lead commitments that are currently under consideration. In total, these pledges combined could exceed 80% of our immediate goal to break ground.

Investing deeply in the success of one of the most transformative educational projects in the region will continue the John and Jane Smith Foundation's tradition of making a profound, positive impact on our community. With this commitment to the Samuel Oschin Air and Space Center, the California Science Center and the future of science learning in Los Angeles, the Smith Foundation would also be honored for its cumulative giving to the EndeavourLA Campaign through a recognition opportunity of your choice. A

list of available opportunities at the $5 million level and above associated with this new and exciting space for excellence in science learning is included in **Attachment A**.
The Smith Foundation helped us begin this ambitious project with the acquisition of Endeavour, and with this additional gift you can once again help us reach a pivotal milestone for the Samuel Oschin Air and Space Center.

II. What makes the Samuel Oschin Air and Space Center project unique and worthy of leadership support?

- Because the California Science Center is located in South Los Angeles and general admission to our permanent exhibit galleries is free, we serve an extremely diverse population, which is atypical for most museums and science centers. The values of accessibility and inclusiveness are core to our mission and underlie everything we do. The Science Center is an important destination for families from the surrounding underserved neighborhoods to learn and grow together. Your support helps expand this impactful learning resource that benefits everyone.

- Our accessibility is particularly evident when comparing the California Science Center's admission policy to other sites awarded space shuttle orbiters. At Kennedy Space Center, admission prices begin at $50 for adults and $40 for children, while admission to the Intrepid Sea, Air & Space Museum and its Shuttle Pavilion cost $33 for adults and $24 for children. At the California Science Center, guests will pay a maximum $2-$3 service charge per person to see Endeavour only when timed-tickets are required to manage attendance during busy periods. Our donors can be assured that they are investing in a resource that anyone can visit, regardless of their financial circumstances.

- While Endeavour's exhibit will be a star attraction, the Samuel Oschin Air and Space Center is so much more. The 200,000 square-foot addition will be even larger than *Ecosystems*, which almost doubled the California Science Center's exhibit space when it opened in 2010. With three major galleries – Air, Space and Shuttle – covering four floors, and approximately 150 new hands-on exhibits, the Samuel Oschin Air and Space Center will dramatically expand educational opportunities for the thousands of people who visit daily, including families as well as school, youth and senior groups.

- The Samuel Oschin Air and Space Center will be the only place in the world to see a complete space shuttle system with a flown orbiter, Endeavour, mated to real Solid Rocket Boosters and ET-94, the last remaining flight-qualified External Tank. This configuration not only preserves an important example of human innovation in its entirety, but also maximizes the exhibit's educational potential.

- The Samuel Oschin Air and Space Center will expose young people to a wide array of scientific concepts that are interdisciplinary, apply to their everyday lives, and can inspire thinking about STEM learning and careers in ways they never expected. For example, an exhibit about designing aerodynamic planes might inspire a child to one day become an architect, design more efficient and environmentally friendly cars, or engineer new ways to make commercial flight even safer. Studies show that most learning is done outside of school and that parents widely believe that California Science Center experiences enhance their children's chances of future success in life. The 24 studies conducted over 10 years through independent evaluator Dr. John Falk and his team strongly affirm the Science Center's impact on advancing science learning among youth, especially those from minority and underserved groups.

- With a four-year average of 2.4 million visitors annually, the California Science Center is the 8th most visited museum in North America, and is the most attended museum outside of New York and Washington, D.C. NASA's award of Endeavour further reinforced our role as a leader in the field of science learning and education, and brought international attention and increased visitation. In fact, Endeavour's arrival in 2012 led us to surpass our Master Plan goal of 2 million visitors a year, and with the opening of the Samuel Oschin Air and Space Center, we may see even more growth in attendance. Serving more people increases our effectiveness and makes donors' dollars go further. It also increases our revenue-generating activities, like concessions, special exhibit and IMAX ticket sales, and the gift shop, which support general operations and in turn makes the California Science Center a stronger, more sustainable organization.

- The Samuel Oschin Air and Space Center is the third and final major expansion envisioned in the California Science Center's original 25-year Master Plan. Its completion will be the culmination of a nearly $600 million project, made possible through private support and the State of California, in order to create an exceptional educational destination. While a few additional Master Plan projects will remain after the Samuel Oschin Air and Space Center opens, the footprint of the California Science Center will be largely complete. Realizing this longstanding vision for the Science Center means continuing to be an innovative leader in informal science education now and in the future.

- In addition to being a major advancement for science learning in our local neighborhoods, the Samuel Oschin Air and Space Center project will have a major positive impact on the greater Los Angeles region. It will be a place where Angelenos of all ages and backgrounds can come together to learn about and be inspired by the wonders of our universe and human innovation. In addition, the Samuel Oschin Air and Space Center will attract visitors from around the world to our city and further its reputation for one-of-a-kind attractions and experiences. By investing deeply in the Samuel Oschin Air and Space Center project, you are investing deeply in our community.

III. Population Served

The California Science Center hosts an average of more than 450,000 students visiting with school or youth groups every year. The Samuel Oschin Air and Space Center will greatly expand the number of ways we can serve these students and every member of our culturally diverse audience, which includes guests from all economic backgrounds. Our largest audience for on-site educational programming is families with children between the ages of 4 and 14, consisting of 39% Latinos, 31% Caucasians, 13% African Americans, 10% Asian Americans and 7% of other ethnicities.

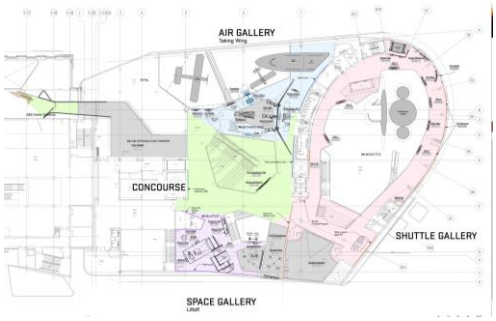
According to recent data from the United States Census Bureau, Latinos represent just 7% and African Americans just 6% of the STEM workforce[1]. In addition, women of all cultural backgrounds make up only 26% of those in STEM careers. The California Science Center's dedication to inspiring science learning in everyone, plus our audience's demographics, make us a unique destination where many who are traditionally underrepresented in these fields can be engaged in an array of hands-on science activities and be introduced to the career possibilities that STEM learning can facilitate.

[1] Landivar, Liana C. 2013. "Disparities in STEM Employment by Sex, Race, and Hispanic Origin." *American Community Survey Reports*, ACS-24, U.S. Census Bureau: Washington, DC. Retrieved from https://www.census.gov/prod/2013pubs/acs-24.pdf

IV. Project Description and Status Update

Through the generous support of the John and Jane Smith Foundation and other major EndeavourLA donors, the California Science Center has achieved so much since Endeavour was awarded in 2011 and project planning for Phase III began. Notable milestones include:

- Stage 1: Decommissioning and transporting Endeavour (2011-12)
- Stage 2: Constructing and opening the temporary Samuel Oschin Pavilion (2011-12)
- Stage 3: Completing concept development, design development and construction documents for the Samuel Oschin Air and Space Center (2011-2016)



Currently, the Samuel Oschin Air and Space Center's building design is in the final review stage and we anticipate receiving approval from the Office of the State Fire Marshal and the Division of the State Architect/Access Compliance shortly. Once these reviews are complete, we are ready to begin construction as soon as our fundraising targets are met. Please find an overview of our building and exhibit plans in **Attachment B**.

Major Galleries

The Samuel Oschin Air and Space Center will be a 200,000 square-foot expansion that will present innovative learning opportunities for guests to explore the science, technology, engineering and mathematics (STEM) involved in aeronautics and space exploration. Integrating a diverse collection of aircraft and spacecraft, immersive experiences and the California Science Center's signature hands-on, educational exhibits, the Samuel Oschin Air and Space Center will present a dynamic and fun learning experience for people of all ages. Including the three multi-level galleries, the facility will span four floors and cover 70,000 square feet of exhibit space.

Air Gallery explores how the pursuit to master the sky involves tradeoffs among four forces of flight – lift, thrust, drag and weight – that affect every aircraft ever built, whether it flies high, low, fast or slow.

Space Gallery examines how the machines we build to explore space extend our reach and help transform our ideas about the universe, whether it's with powerful telescopes that look at distant stars and galaxies, robots that go places and collect data, or spaceships designed to transport humans and protect them from lethal environments.

Shuttle Gallery will reveal how the world's first reusable spacecraft has helped us learn to live and work in low Earth orbit and prepare for bolder and more distant missions. Endeavour will be displayed vertically with real Solid Rocket Boosters and ET-94, the last remaining flight-qualified External Tank. Not only will this preserve an important part of space exploration history, it will provide guests with an unparalleled educational experience as they view the shuttle up close from multiple angles and elevations.

Educational Resources and Programs

The Samuel Oschin Air and Space Center's major themes will be expressed through a variety of educational formats, serving a diverse community of learners. This includes the Science Center's outstanding educational programs such as our Community Youth Programs, which provide hands-on learning and internship opportunities for local underserved youth; Hands-On Science Camp, which offers a wide variety of fun science-themed courses for children in preschool through 10th grade; and our Professional Learning Program for teachers, community educators and parents. The Samuel Oschin Air and Space Center will also provide many rich learning opportunities for students of the Science Center School, our onsite neighborhood elementary school in partnership with the Los Angeles Unified School District, which serves over 650 students, primarily from underserved local communities.

The Samuel Oschin Air and Space Center will feature new and unique exhibit content, learning areas and programming. Overall, it will include approximately 150 interactive educational exhibits, 100 artifacts including aircraft and spacecraft and 8 immersive simulations that provide engaging free-choice learning experiences, helping guests learn basic scientific principles through experimentation and discovery. Spaces that will complement the exhibits, activities and programs include a Discovery Room that provides both self-guided and facilitated science activities for children under age eight and their families or caregivers; the Concourse, a dynamic central space with flexible seating for special events and guest presentations as well as large-scale demonstrations and experiments led by Science Center educators; and an Aerospace Learning Lab that will be used for education programs on design, engineering and aerospace topics. In addition, a new Special Exhibits and Events Center will host temporary special exhibitions on a variety of topics as well as provide an exciting and impressive gathering space for a wide range of community groups and events.

The California Science Center also continues to expand its collection of aviation and space-related artifacts and technologies that will illustrate the important science, design and engineering principles explained through the Samuel Oschin Air and Space Center's educational exhibits. Our most recent acquisition is ET-94, the only flight-qualified space shuttle External Tank in existence, which will be part of Endeavour's vertical display. After traveling by barge from NASA Michoud Assembly Facility near New Orleans, through the Panama Canal and up the Pacific coast to Marina del Rey, ET-94 embarked on a day-long trip through the streets of Los Angeles to the California Science Center. Like Endeavour's homecoming, this historic event brought thousands of community members together to celebrate and be inspired by the power of science learning. The enthusiastic response was another example of how important a facility like the Samuel Oschin Air and Space Center will be to our community by engaging the public, especially children, in air and space science and inspiring them to learn more about a wide range of STEM topics.

Goals and Objectives
The completion of the Samuel Oschin Air and Space Center will advance the California Science Center's educational mission and strategic vision, and help us to achieve the following goals and objectives:

Key Educational Goals

- Build positive attitudes toward science by stimulating curiosity and providing fun, memorable experiences for people of all ages;
- Promote STEM literacy and the development of process skills that enable people to investigate the universe around them;
- Provide STEM opportunities for a wide range of instructors including Pre K-12 teachers, parents and community educators;
- Build awareness for careers in STEM related fields and encourage underrepresented groups to pursue higher education and professions in these areas; and,
- Help guests see science as an indispensable tool for understanding our world and realize that everyone is a scientist.

Master Plan Objectives

- Dramatically expand the Science Center's educational exhibits and programs to provide invaluable science learning opportunities to guests of all ages and socio-economic backgrounds;
- Complete the fourth and final permanent, thematic exhibit area at the California Science Center and the largest component of Phase III of the Science Center's Master Plan to build a world-class educational resource for the people of California;
- Expand our capacity to reach a wide and diverse audience including community members who have never been to the Science Center before and regional, out-of-state and international visitors;
- Support our efforts to stimulate economic growth and the ongoing revitalization of Exposition Park and the Figueroa Corridor, providing increased employment and volunteer opportunities for community residents, students, educators and others.

V. Next Steps
The projected timeline below for the remaining stages of the project is contingent upon meeting fundraising targets and breaking ground in FY 2016-17.

Activity	**2016**	**2017**	**2018**	**2019**
Educational exhibit final design and fabrication	X	X	X	
Educational program plan development		X	X	X
Groundbreaking/Building Construction		X	X	X
Endeavour vertical installation			X	X
Educational exhibit installation			X	X
Remedial evaluation, burn-in and revisions of exhibits			X	X
Grand Opening of Samuel Oschin Air and Space Center				X

VI. Samuel Oschin Air and Space Center Budget

Project Component	Budget
Shuttle Acquisition, Housing, Exhibits and Programs	**$51,898,438**
Samuel Oschin Air and Space Center Building Expenses	**$158,019,783**
Architectural Design	*$16,444,816*
Building & Misc. Construction Costs	*$127,770,373*
Shuttle Vertical Assembly	*$ 13,804,594*
Educational Exhibits and Fabrication	**$36,955,636**
Project Staff, Campaign and Opening	**$9,596,380**
Project Contingency	**$6,341,726**
TOTAL	**$262,811,963**

EndeavourLA Campaign Progress
We continue to make steady progress toward the EndeavourLA Campaign's $250 million goal, with $115 million in commitments secured. We are currently working with our Board of Trustees and other close advisors to actively broaden our prospect pipeline and ramp up Campaign fundraising to achieve our goals, especially with the increased awareness for the Samuel Oschin Air and Space Center project brought on by the arrival of ET-94. An additional leadership-level gift would be crucial to moving us closer to groundbreaking. Therefore, a commitment at this time would provide a unique opportunity for the Smith Foundation to be an exceptional partner in creating this world-class learning resource. A list of donors of $1 million and above is provided in **Attachment C**.

VII. Conclusion
The California Science Center Foundation is deeply grateful to the John and Jane Smith Foundation for your friendship and generous support for nearly a decade, which has helped us advance our mission in a variety of ways. From Rose Smith's dedicated Board of Trustees service since 2007, to the Foundation's generous $1 million gift to help us complete *Ecosystems*, to your most recent investment in the Samuel Oschin Air and Space Center, the Smith Foundation's involvement has been integral to our success.

We welcome the opportunity to host the John and Jane Smith Foundation's Board of Directors at the California Science Center to provide a full update on the project and discuss this request for additional funding in order to advance the Samuel Oschin Air and Space Center project to the pivotal milestone of groundbreaking. Thank you again for your thoughtful consideration of this request for support, which will help to provide innovative STEM learning opportunities for people of all ages, build an iconic destination for Los Angeles and further inspire the scientists, explorers and leaders of tomorrow.

For more information, please contact:

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