

## Letter of Intent

### I. Applicant Information

Lead Applicant	Media Contacts
Milagros Diana Garcia, [REDACTED]	Walter K. Booker, Proposed Chairman email: wkb206@msn.com phone: 201-404-1990

#### c. Board of Trustees & Founding Team:

**Milagros Diana Garcia**, lead applicant and founder of the Harlem Engineering and Applied Science charter school (HEASCS), holds a BA in History from Columbia University, MA in Teaching Social Studies and Ed.M. in Education Leadership from Teacher's College. She has worked with bilingual and special needs students in New York City; visited more than 200 schools as part of her research for this proposed school; and trained at Columbia Secondary School for Math, Science & Engineering as a school leader resident intern. She has 7 years of teaching experience in bilingual social studies, English and elementary level. Her past work experience includes: four years of corporate work in the technology industry where she successfully managed accounts in excess of \$40 million in revenue; and three years of work in the investment banking industry. A native of Harlem, and her family's first generation college graduate, she grew up in the St. Nicholas Public Housing Projects; consequently, she has a mission to close the achievement gap for African-American and Hispanic students in the field of STEM. She served as Academic Chair of the Board of Merrick Academy Charter School in 2010-2011, currently a Mentor-Coach for New York Needs You, Member of the Board of Trustees Advisory and Fundraising Committee for the Dome Project. She will serve on the Education, Operation, Finance, Marketing and Fundraising Committees of HEASCS.

**Walter Booker** has a AB in government from Harvard College, and is currently the Chairman of the Board of Directors of Sponsors for Educational Opportunity, Inc. (SEO), a not-for-profit educational and community service organization that has great success in providing a range of academic, personal enrichment and mentoring services to black and Hispanic students. In addition, he has been active in numerous recruitment and fundraising activities for his alma mater. He has raised more than \$10 million during the last 10 years serving on the board at SEO. Moreover, throughout his 22 year career in the corporate financial field, he has held various executive level positions and managed more than \$10 billion in assets. He will be the Chairman of the Board of Trustees of HEASCS.

**Dr. Carlos Pagan** holds an Ed.D from Teachers College in School Leadership; is the founder and director of two successful dual language International Baccalaureate charter schools in Albuquerque (New Mexico International School and Corrales International School). He is Assistant Professor of Educational Leadership at the University of New Mexico. His research interests include charter schools, performance based compensation, and school turnaround. He has been a bilingual teacher and administrator for more than 25 years. He will serve on the Education Committee of HEASCS.

**Henry Ramos Rey** has a BA in physics and Math from Colgate University, an M.S. in Engineering and Computer Science from the School of Engineering and Applied Science at Columbia University. Also, he has more than 24 years' experience as an engineer at Columbia University and Presbyterian Hospital, is currently a physics teacher and a certified pilot and flight instructor, helping children prepare for jobs in the Aviation and Aerospace industry. Every weekend he spends his time training children at Frederick Douglas Academy in Harlem for flight and air traffic control jobs. He has led many technology classes and tech labs, such as electronics, computer science, flight club, and ground school for the FAA written tests. His partnership links are York College and the FAA Port Authority. He will serve on the Education Committee of HEASCS.

**Dr. José Maldonado-Rivera** holds a Ph.D in Science Education from Columbia University Teacher's College. He founded Columbia Secondary School for Math, Science and Engineering, served as a Principal for five years and successfully raised over \$1,000,000 in funds during a 3 year start-up campaign. During his leadership, he was awarded the Public School Principal of the Year award (2009);

and the Chancellor's Bonus Award for Outstanding Performance (2009). The school obtained a 96.7% Progress Report (2008-9) and oversaw fundraising and grant writing campaign of over \$1 million. He also managed the selective admissions process involving over 2,500 applicants per year. He secured building improvements valued at over \$3 million. He hired and supervised all faculty and staff and put professional development and evaluation programs in place. He will serve on the Education Committee of HEASCS.

**Jose A. Santiago** holds a BS in Computer Science and a MS in Executive Technology Management from Columbia University where he is currently the Senior Director of the Technology Department. During his 26 year career in that department, he has managed the University's \$30 million networking and telephony infrastructure. He is also responsible for classroom academic technologies and is an active member of the faculty of Workforce Opportunity Services where he teaches technology and provides professional mentoring to African-American and Hispanic young adults. He currently has a 5 year old son in Success Academy Upper West. He will serve on the Education Committee of HEASCS.

**Nelson Padilla** has over 20 years' experience in information technology, in building home networks, in problem solving, in research and in resolution. Currently, he serves as Associate Director of the Technology Department at Columbia University. He will serve on the Education Committee of HEASCS.

**Henry Sosa** is an IT professional with over 12 years' experience. Throughout his career he has assumed various roles in engineering, administration, deployment, and support. Additionally, he possesses several industry certifications, which coincide with his diverse career. The industry certifications that Henry has attained include: CompTIA A+ PC Technician, CompTIA Network + Technician, Cisco Certified Network Associate, Dell Certified Systems Expert, ITILv3 Foundation, and Microsoft Systems Engineer. Currently he serves as a Senior Field Operations Coordinator for Columbia University. In this role he supervises staff, deployment, services, and support of campus wide infrastructure and electronic education learning environments. Henry will serve on the Education Committee of HEASCS.

**Karen R. Bruce** has a BA in Electrical Engineering from Kettering University, Michigan. Over the last 3 years, she has worked on smart-grid development at Con Edison's New York locations. She started her career working on industrial automation, to which she was introduced to as an intern in the automotive industry. Karen is passionate about sustainability and works with various organizations including Solar One, O2NYC, and the Sustainability Practice Network (SPN); she is a member of USGBC-Emerging Green Builders of NY (EGB-NY) and in 2008 had the privilege to sit in on a PlaNYC Advisory Board Meeting. In August 2010, she founded Black & Sustainable, a network for African Americans in New York City. She will serve on the Education committee of HEASCS.

**Carolyn Ellison** has a BA in Telecommunications from Michigan State University, and an MBA from University of Michigan. She is a Professor at Pace University and has more than 15 years of experience in the marketing industry. She has managed a portfolio of more than \$10 million and has an excellent track record in building brands and leading teams, both domestically and internationally, across a range of product categories. Her professional expertise includes: marketing plans, business model capabilities, and marketing opportunities. She will serve on the Operation, Finance, Marketing and Fundraising Committees of HEASCS.

**Grenetta Briggs Mason** holds a BA in Mathematics and Sociology from Clark University, an MBA in Finance from Columbia University Business School and an MS in Education focusing on Human Resources Development and Training from Fordham University. An accomplished professional with over 25 years of corporate experience, she has worked at various Fortune 500 companies. For over 17 years she worked at JP Morgan Chase, first as a Systems Analyst and later as Assistant Vice President in Corporate HR Development and Training, responsible for Technology Development and Training. She

has a broad range of experience, encompassing coaching, training, HR development, small business consulting, and business/systems analysis and technology. She will serve on the Operation, Finance, Marketing and Fundraising Committees of HEASCS.

**Anisa Keith** graduated with an MBA from Columbia University Business School and a BA in Economics from Georgetown University. She has more than 12 years of financial experience, marketing, and training in total quality management systems. She currently serves as an independent consultant, specializing in financial, advisory and business strategy. She has served as interim CFO/COO of an internet-based social enterprise as advisor on accounting, operations, Human Resources, corporate structure and financing issues. Prior to that, she worked as the COO and Head of Business Development at an architecture and design firm where she launched the firm's international business, while winning key contracts in the UAE and Qatar. A resident of Harlem, she will serve on the Operation, Finance, Marketing and Fundraising Committees of HEASCS.

**Jill Cannon** holds BFA in Communication Arts and Theater Design from Howard University, and an MA in Fine Arts Education from City College. She began training staff and student interns in mediation, arts administration, and media planning and buying. During her more than 20 years in the corporate sector she has served as NASD Mediation Administrator, Arts Administrator, Marketing and Media Campaign Strategist, Director of Media, Research and Special Projects for a recruitment advertising agency and Creative Director and Publication Designer for a Harlem marketing firm. She will serve on the Education, Marketing, and Fundraising and Education Committees of HEASCS.

**d. Proposed Board of Trustees:** Please see section c: all founding members will also be Trustees.

**e. Replication or Network Information:** Not a replication.

**f. Applicant History:** The Founding Board Members submitted their application in February of 2011 and the team achieved the capacity interview phase. Our application was not considered for recommendation.

## II. The Proposed Charter School Information

**a. Proposed School name:** Harlem Engineering and Applied Science Charter School

**b. Proposed School location:** District 4 and District 5

**c. Planned grades and enrollment:**

Grades	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
6	200	50	125	125	125	125	125
7		200	50	125	125	125	125
8			200	50	125	125	125
9				200	50	125	125
10					200	50	125
11						200	50
12							200
Total	200	250	375	500	625	750	875

Projected Enrollment: Harlem Engineering and Applied Science Charter School

**d. Proposed management/partner organization:** The school will not be managed by any organization. Our education partners include: City College of New York, Society of Hispanic Professional Engineers (HSPE), and Sponsors for Educational Opportunity Program (SEO).

**e. Proposed School Mission:** The Harlem Engineering and Applied Science Charter School will prepare the next generation of engineers and applied scientists for a challenging college education. By providing a robust active-learning, inquiry-based, and college-bound educational experience, HEASCS students will embrace higher education, become leaders in their communities, attain their career of choice, and remain inquisitive, life-long learners and contributors to society.

- f. School Overview:** HEASCS will conduct a rigorous comprehensive academic program that includes:
1. College Preparatory Program: will embrace a 6-12 middle school liberal arts curriculum, a Science, Technology, Engineering, Mathematics (STEM) program and a rigorous two-year International Baccalaureate Diploma Program.
  2. Core Academic Skills: all students will achieve at a high level, and master reading, writing, math, science, engineering, and two languages. HEASCS students will learn critical thinking, analytical reasoning, writing and problem solving skills.
  3. Seven Survival Skills: will be implemented in our daily classroom practice, as discussed in the Tony Wagner book, *The Global Achievement Gap*.<sup>1</sup>
  4. Our students will develop a passion for learning, participate in the larger society, and pursue college and professional careers.
  5. High Expectations: will be demanded of all students, teachers and staff members.
  6. Ongoing Collaboration: will be facilitated between teachers, parents, other community stakeholders and college-level partnerships. Intelligent use of community resources will contribute to an outstanding school.<sup>2</sup>
  7. Infusion of STEM courses in the curriculum: STEM will provide our students with in depth content knowledge and real-life connections across all science disciplines, and will also provide them with distinctly realizable higher education and career opportunities.
  8. STEM and Industry Career Focus Lectures Series: will be led by distinguished professionals, provoking dialogue and inspiring HEASCS students.
  9. Mentorship Program: beginning in 6<sup>th</sup> grade and including personal and professional development.
  10. Technology-based School: will include high-speed Wi-Fi networking access, and a digital textbook environment. Each classroom will have an Apple TV smart-board and a laptop for every student. Also, each teacher will have a personal laptop, iPad and printer.
  11. Data Driven School: will continuously analyze student academic outcomes and provide immediate interventions.
  12. Partnerships with Area Universities:<sup>3</sup> A challenging collegiate environment supports intellectual risk taking, creativity, and dedication in the pursuit of both personal and academic excellence.
  13. Special Education and English Language Learners: will maintain inclusion, collaboration and support for these students.<sup>4</sup>
  14. Respect for the Teaching Profession: recognition for academic excellence, participation in the decision-making process, respect as professional elite, and support for their professional development.
  15. Extended School Year and School Day: an extended school day (8:00 am to 6:00 pm) and school year (200 days), including an afterschool enrichment program and a rigorous summer program.
  16. No Excuses Model: adoption of a culture of academic excellence and timely in all that we do daily, where failure is not an option.
  17. Culture-Building, Character, Values and Ethics Program: each morning students will join our leadership community circle to learn about character development and leadership as part of their academic studies at HEASCS.
  18. Parent-led Public Service Learning Project: will include the furtherance of social justice community action.
  19. Online Interactive Open Courseware: an MIT equivalent program will provide students, parents and teachers access to free online education courses in all subjects and make lectures and course materials available to all.

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1. Tony Wagner, *The Global Achievement Gap* (New York: Basic Books, 2008).

2. See Section II for a Discussion of Partnerships with Area Universities.

3. Preliminary discussions thus far indicate commitments for various levels of participation from area institutions of higher education including, but not limited to, Columbia University and City College.

4. See Section II Education Plan for a full description of HEASCS program for Special Ed and ELL students.

**g. School Target Population:** HEASC will serve students residing in District 4 and District 5. These neighborhoods are made up largely of African-Americans and Latino-Americans of low income, low family education, and English language learners. Dropout rates are disproportionately high here. For example, 40% and 68% of District 5's 8<sup>th</sup> graders score below grade level on standardized New York State Mathematics, Science, and English Language Arts exams, respectively.

### **III. Enrollment and Retention of Students with Disabilities, English Language Learners and**

**Students who are eligible for free and reduced-price lunch:** HEASC is committed to reaching out to critical student populations in our target area, including minorities, ELLs, students with disabilities, the economically disadvantaged, and other hard-to-reach student populations. Our recruitment strategies will incorporate the following key components: **1.** Marketing materials in English and Spanish detailing our Special Education and ESL services, including appropriate translation services for parents; **2.** In our marketing materials, promotion of (a) extended day, extended school year curriculum and extra-curricular activities; (b) STEM conceptual framework and its relevancy to higher education and career planning; and (c) Academic Success Center: our partnerships with area universities and our college preparatory school culture; **3.** Creation and maintenance of a school website, blog and *Facebook* page; **4.** Creation of a monthly newsletter, available online and in print and highlighting faculty, staff, administrators, students, programs, and progress; **5.** Spanish interpreter; **6.** Continued dialogue with the Committees on Special Education (CSE) for CSDs 4 and 5 to discuss community needs, provide information about our school and provide additional points of access and information by having recruitment materials circulated to families served by these offices; **7.** Organizing and hosting informational meetings and presentations at area churches, libraries, and organizations in District 4 and District 5; and **8.** Press coverage and advertising of recruitment and enrollment kick-off events with area radio, television and print media. **9.** Compliance: will comply with all charter school laws and regulations, specifically as they pertain to serving students with disabilities, English Language Learners, and those eligible for reduced and free lunch program.

**IV. Public Outreach and Community Support:** We have created a Facebook page Harlem Engineering and Applied Science Charter School, and a website, [www.HEASCS.org](http://www.HEASCS.org), which contain information on the school and allow Harlem community members to post and comment on our school design. Our founding board have canvassed the streets of Harlem and distributed flyers about our school and committed board members. We have met with the Community School District 4 (CSD), Community Education Council 4 (CEC), Community School District 5 (CSD), and Community Education Council 5 (CEC), to inform and engage the public in our planning and development and attain input for our school design. We have been working on public outreach for two years seeking support from many community residences, organizations and elected officials. We have received an overwhelming interest in our school and two parents from Success Academy in Harlem joined our board. We received more than 500 signatures from parents in the community expressing interest to send their children to our school. In addition, the Dean at City College Grove School Engineering, the Society of Hispanic Professional Engineers and Sponsors for Educational Opportunity (SEO) have joined forces to help with our public outreach efforts; these organizations work with 2000 parents and children in their STEM program K-12 grades, enough to solicit recruitment for HEASCS. Moreover, I visited more than 200 New York City Public Schools and had numerous conversations seeking input from middle and high school students about our school design. These conversations led to the unique features in HEASCS' educational design.

We met with Assemblyman Keith Wright, Senator Bill Perkins, Assemblyman Robert Rodrigues, and Congressman Charles B. Rangel. We have also met and intend to establish ongoing relationships with the following organizations: the Union Settlement Association, the 116<sup>th</sup> Street Block Association, the Clinton Housing Development, the New York City Administration for Children's Services, the Community League of the Heights, the Ecumenical Community Development Organization, the Manhattan Valley Development Corporation, EL Barrios Operation Fight-Back, the Hellgate

Management Corporation, the Hope Community, Inc., the Northern Manhattan Improvement Corporation, Nuevo EL Barrio Para La Rehab De La Vivienda Y La Economia, Sinergia, Inc., the Strycker's Bay Neighborhood Council, and the West Harlem Group Assistance. Finally, we have also contacted the following local organizations: the East Harlem Tutorial Project, the Harlem Center for Education, the 100 Black Men Organization, the Children's Aid Society, the Harlem IVY, and the Upward Fund After School Program-East Harlem, the Riverside Church, the Second Canaan Baptist Church, the New Hope Baptist Church of Harlem, and the Congregation.

**Dean Joseph Barba Grover Engineering School  
University Partnership, CCNY CUNY,**

**Lead Applicant, Milagros Garcia**

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**Edward Montenegro, NY Chapter President,  
Society of Hispanic Professional Engineers**

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**CEO, William Goodloe  
Sponsors for Educational Opportunity (SEO)**