B.1 Applicant Entity

A. Organizational History

Lead founders of SySTEM Schools, Angelica Cruz and Nicole Fernandez are Teach For America alumni who both taught in Central Phoenix and witnessed firsthand the need for students to learn how to think critically, problem-solve, and become active in their communities. Throughout their time as classroom teachers, they repeatedly noticed how passive students were as learners, particularly by the time they reached high school. Appalled by the low achievement of their incoming students, Ms. Cruz and Ms. Fernandez worked relentlessly to increase their students' learning by engaging them in meaningful, rigorous learning activities. Ms. Cruz and Ms. Fernandez were fated to meet in the Fall of 2009, when they sat next to each other on their first night of class in the Arizona State University Teach For America Fellowship Master's Degree program in Educational Administration. They soon recognized the similarities in their educational beliefs and began talking about the idea of starting a school that would provide rigorous and relevant educational experiences to students. Although intrigued by the idea, neither Ms. Cruz nor Ms. Fernandez was aware this dream could actually become a reality until two years later, while sitting in a Starbucks reviewing Ms. Fernandez's final documents to submit for her National Board Certification in Mathematics. Ms. Cruz had received a phone call from a colleague earlier that week informing her of a program called Aspiring Leaders Fellowship (ALF), where individuals interested in starting charter schools could study best practices in education and travel to excellent charter schools to see them in action. Ms. Cruz and Ms. Fernandez began discussing the possibility of actualizing their idea to start an exceptional school where students and teachers would regularly analyze and reflect on rigorous content, and, ultimately, where students would be inspired to create innovative change in their community. They each applied to the ALF program, were accepted in the fall of 2012 and began their official path towards opening SySTEM Phoenix. During the ALF program they were awarded a three-year AZCSP grant for $690,000 to support the planning and start-up costs of SySTEM Phoenix.

SySTEM Schools was incorporated on October 12, 2012 for the sole purpose of opening a STEM school in Central Phoenix focused on teaching problem-solving and critical thinking skills to students to create innovative change in the community. The corporation has a Dun & Bradstreet (DUNS) number, an employer identification number (EIN), and is in the process of submitting 501(c)(3) tax-exempt paperwork. The Articles of Incorporation, Amendments, and Bylaws of SySTEM Schools, Inc. are attached. As stated in the Bylaws, the Board of Directors will serve as the Governing Body of SySTEM Phoenix, and be referred to as "the Board."

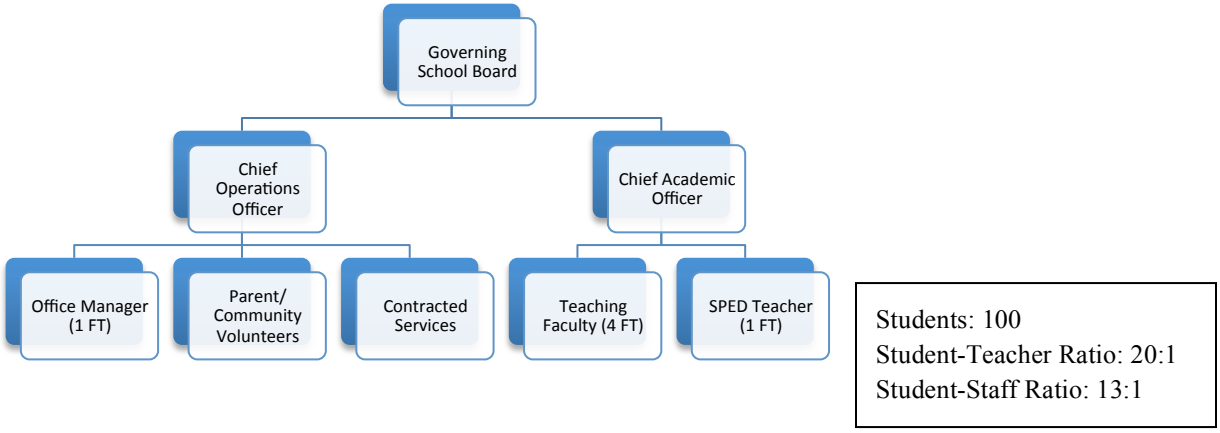
The founding board of SySTEM Phoenix will be comprised of a diverse group of community members committed to the vision of creating a rigorous, STEM-focused educational option for students in Central Phoenix. Founding board members will possess a broad range of skills that will be necessary for sustainable operation of SySTEM Phoenix, including background knowledge in finance, education, STEM industries, real estate, and facilities. Founding board members began meeting in March 2013 to assist in refining the school vision and plan, writing the charter application, and recruiting supporters of the school's mission and vision. Additional community members interested in becoming board members have participated in these meetings as well.

B. Organizational Chart and Reporting Structure

The organizational charts for SySTEM Phoenix illustrate the reporting structure for all faculty, staff, and board members. The school will be co-led by the Chief Operations Officer and Chief Academic Officer, both reporting to the Governing Board. All employee positions related to operational and business/finance aspects of the school will report to the Chief Operations Officer, while all academic positions will report to the Chief Academic Officer.

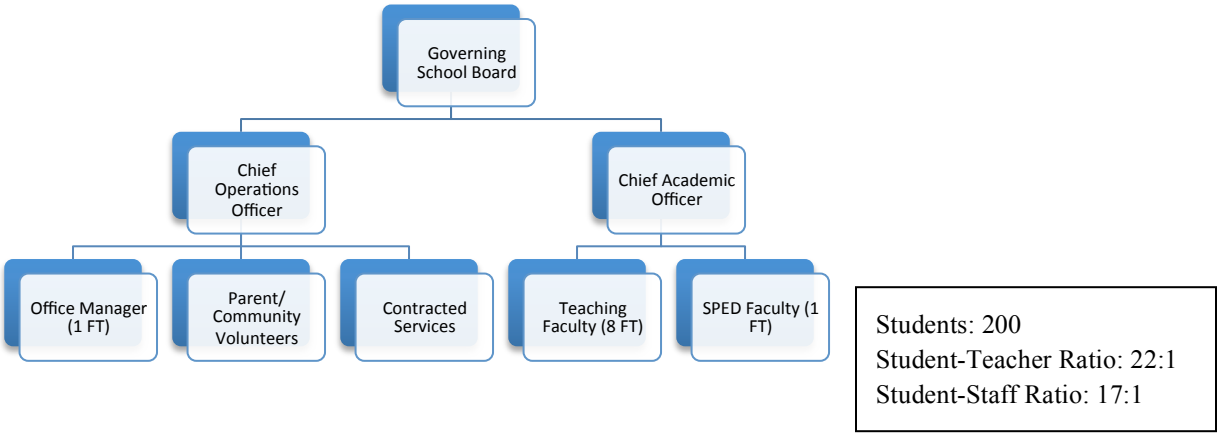
Organizational Charts

Figure B.1.1: Organizational Chart (Operational Year One), Grade 6



SySTEM Phoenix will open with two key administrators, the Chief Operations Officer and the Chief Academic Officer, in addition to an Office Manager. Community members with fingerprint clearance cards will be recruited as a contracted service to lead and assist with STEM in Action blocks in Y1-3 to ensure sufficient planning time is provided to teachers.

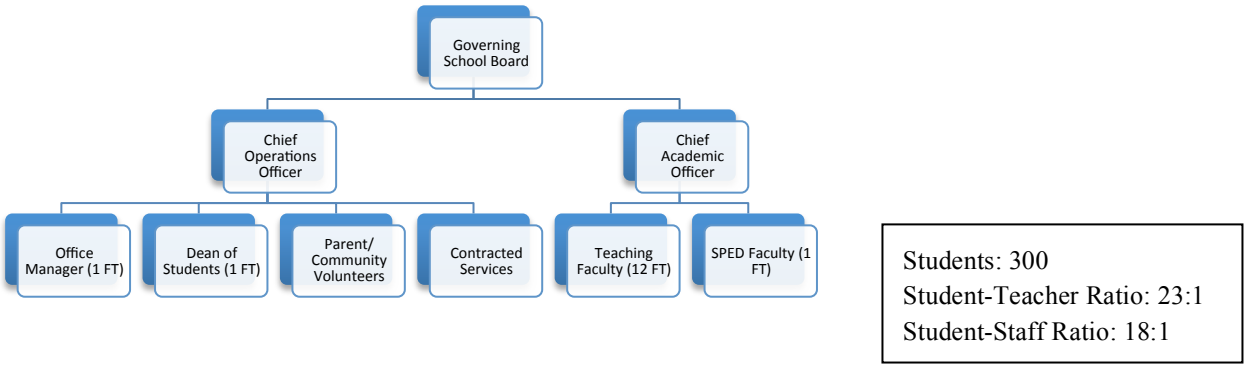
Figure B.1.2: Organizational Chart (Operational Year Two), Grades 6-7



Key changes in year two will include the addition of 4 more teaching faculty as enrollment is expected to double with the addition of 7th grade and a new 6th grade cohort. Community members and interns with

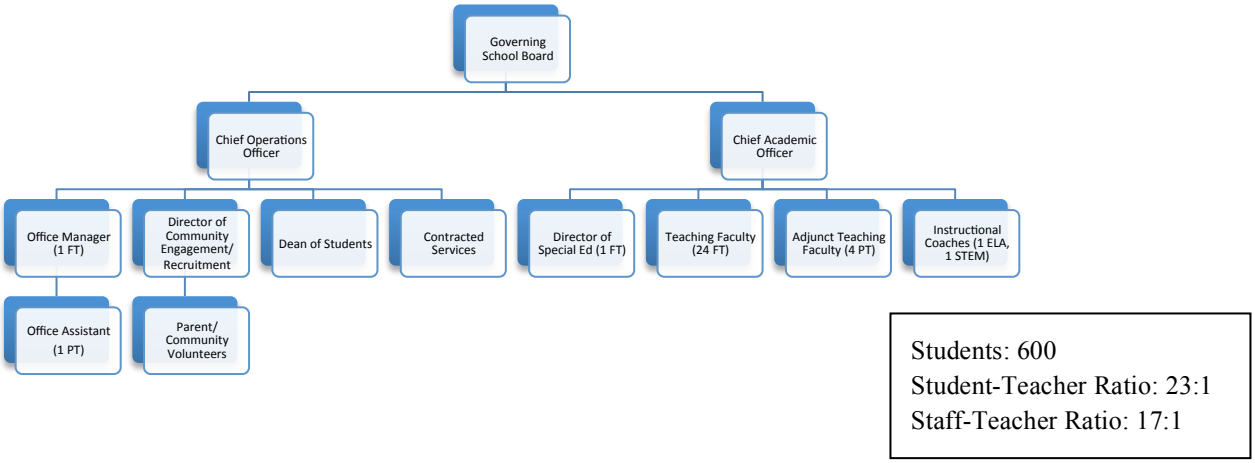
fingerprint clearance cards will continue to be recruited to lead and assist with STEM in Action blocks to ensure appropriate planning time for teaching faculty.

Figure B.1.3: Organizational Chart (Operational Year Three), Grades 6-8



In year three, four additional full time faculty will be hired to support growing enrollment and addition of 8th grade. Additionally, a Dean of Students will be hired in Y3 to manage student culture and discipline.

Figure B.1.4: Organizational Chart (Full Implementation - Year Seven), Grades 6-12th



By year seven, SySTEM Schools will be at full build out with 600 students in grades 6-12. Staff will include two instructional coaches to support teachers in integrated instruction and vertical alignment of curriculum. Additional operations staff will include a Director of Community Engagement to optimize STEM partnerships and direct recruitment efforts. Additionally, the Dean of Students will expand to include College Counselor responsibilities to ensure students have comprehensive support throughout the college application process.

Reporting Structure

The narrative below describes the reporting structure for each position within SySTEM Schools. The responsibility to hire, evaluate, and terminate employees belongs jointly to the Chief Operations Officer and Chief Academic Officer. The responsibility to hire, evaluate and terminate the Chief Officers belongs to the Governing Board.

- **Governing Board:** The Governing Board of SySTEM Schools, Inc. will serve as the Governing Body of SySTEM Phoenix. SySTEM Schools is the charter holder and is legally and ethically responsible for governance of the school. The Board will regularly monitor student achievement and financial operations, ensuring students are provided school choice and student achievement improves.

  a) ***Mission, Policy, and Strategic Planning:*** The Board will ensure alignment with the school's mission and vision. The Board will create and approve all policies related to the school.

  b) ***Financial Oversight:*** The Board will be responsible for reviewing financial documents on a regular basis and ensuring the school is financially responsible and sustainable. The Board will review and approve the annual budget, ensure adherence to it, set goals for fundraising, and contribute to fundraising efforts (through time or monetary donation).

  c) ***Legal and Regulatory Compliance:*** The Board will ensure compliance with all laws and regulations, including, but not limited to those required by the Department of Education, the State Board for Charter Schools, and Federal Employment Law.

  d) ***Chief Officer Oversight:*** The Board will select, manage, support, and evaluate the Chief Operations Officer and Chief Academic Officer. The Board will create and implement a comprehensive evaluation system of the Chief Officers, set compensation of the Chief Officers, and offer guidance and support as needed.

  e) ***Promotion and Accountability to the Public:*** The Board will promote the school to the public, advocating for the school in a variety of forums. The Board will adhere to Open Meeting Law regulations.

- **Chief Officers (Y1):** The Chief Officers are responsible for all managerial aspects of the school and report directly to the Board. The Chief Officers will jointly hire, evaluate, and terminate all employees.

  - ***Chief Operations Officer:*** The Chief Operations Officer (COO) oversees all aspects related to operations and business of the school. The COO serves as the Authorized Representative to the Arizona State Board for Charter Schools, conducts fundraising and public relations, and manages finances of the school. The COO coordinates all business and contracts with outside vendors and manages all compliance requirements of the school (Department of Education, Department of Economic Security, etc). In years 1-3 the COO manages the Registrar/Office Assistant and parent and community volunteers

who assist with operational aspects of the school. In year 7 the COO also manages the Director of Community Engagement and the Dean of Students/College Counselor.

- ***Chief Academic Officer:*** The Chief Academic Officer (CAO) oversees all aspects related to instruction within the school. The CAO manages all full-time and adjunct teaching staff, including the Director of Special Education in year 7. In years 1-6 the CAO serves as the primary instructional contact, observing and coaching full and part-time teachers, as well as serving as an instructional evaluator. In year 7 the Instructional Coaches assume the majority of the responsibility of observing and coaching teachers, although the CAO continues to observe and provide instructional feedback on a limited basis. The CAO continues to hold the responsibility of formally evaluating teachers. The CAO oversees the Special Education Teacher's maintenance of SPED records, oversees the IEP process, and ensures that students receive appropriate accommodations and/or modifications within the classroom and during all assessments as defined within their IEPs.

- **Instructional Staff:** All instructional staff report to Chief Academic Officer.

  - ***Teaching Faculty:*** Teaching faculty develop and implement curriculum, instruction, and assessment that supports all students in developing critical thinking and problem solving skills and mastering Common Core standards. All teachers are Highly Qualified as defined by No Child Left Behind. Teachers report to and are evaluated by the Chief Academic Officer. At least one teacher will have Special Education Certification and in years 1-6 will provide additional support to the Chief Academic Officer, assist in the IEP process, and ensure students receive appropriate modifications and/or accommodations as required in their IEPs.
  - ***Director of Special Education (Y7):*** The Director of Special Education manages all SPED records, oversees the IEP process, and ensures students receive appropriate modifications and/or accommodations.
  - ***Instructional Coaches (Y7):*** An English Language Arts (ELA) Instructional Coach and a STEM Instructional Coach will support teaching and learning once the school has 500 students. The ELA and STEM Coaches will report to the Chief Academic Officer and will lead curriculum development efforts, observe and provide feedback to teachers, lead Cognitive Coaching efforts, and coordinate assessment activities in their respective departments. Instructional Coaches assist in evaluating prospective faculty members.

- **Operational Staff:** All operational staff report to the Chief Operations Officer

  - ***Registrar/Office Manager (Y1):*** The Registrar/Office Manager manages all student records, the Student Information System, SAIS compliance, and all electronic student databases. The Registrar/Office Manager oversees all office systems required to ensure compliance with the Department of Education and the Arizona State Board for Charter Schools. The Registrar/Office Manager reports to and is evaluated by the Chief Operations Officer.

- ***Dean of Students (Y3):*** The Dean of Students manages school culture and all student discipline. The Dean of Students works to proactively create a positive school culture and robust extra curricular program. The Dean of Students coordinates partnerships for college scholarships and assists students in actively researching and applying for scholarships in high school. The Dean of Students collaborates closely with the Director of Community Engagement and Recruitment in year seven and beyond to increase STEM and community partnerships that contribute to the school's extra-curricular program. The Dean of Students reports to and is evaluated by the Chief Operations Officer.
- ***Director of Community Engagement and Recruitment (Y7):*** The Director of Community Engagement and Recruitment oversees all STEM Partnerships and facilitates all student and teacher recruitment efforts. The Director of Community Engagement and Recruitment reports to the Chief Operations Officer.
- ***Office Assistant (Y7):*** The Office Assistant provides administrative assistance to the Office Manager and Chief Operations Officer, providing duty coverage as needed. The Office Assistant answers the main telephone line and transfers calls to appropriate personnel. The Office Assistant reports to and is evaluated by the Office Manager.

C. Subsidiary Relationships with Other Organizations

SySTEM Schools does not have a subsidiary relationship with any other organization. SySTEM Schools is not currently and has not previously been involved with a prior charter operation.

D. Other Charters Operated by Applicant

SySTEM Schools is not currently and has not previously been involved with a prior charter operation.

E. Roles of Charter Principals

Figure B.1.4: Principals of SySTEM Schools

Founding Board Member	Area of Expertise	Proposed Officer Status
Angelica Cruz Chief Operations Officer	School Leadership Business & Operations Compliance Assessment	Co-Founder Non-voting, Ex-officio Authorized Representative
Nicole Fernandez Chief Academic Officer	School Leadership Curriculum Instruction Assessment Problem-based learning	Co-Founder Non-voting, Ex-officio
Doris Roman	Accounting Community Relations Fundraising Grant Writing STEM Instruction	Board Member

Angelica Cruz-Chief Operations Officer, Ex-Officio Director, Authorized Representative

Angelica Cruz graduated Magna Cum Laude from Tufts University with a double major in Child Development and Community Health. After graduation she joined Teach For America, working in some of Phoenix's most poverty-stricken neighborhoods, raising reading proficiency rates in her Kindergarten classroom from 30% to 100% passing the DIBELS Reading test. After six years as a classroom teacher, Angelica was honored as a Rodel Aspiring Principal and received an Excellence in Teaching award from the Creighton School District Governing Board for significantly raising student achievement in her school. During that time, Angelica completed a master's degree in Curriculum and Instruction. Teach For America also awarded Angelica a fellowship to complete a second Master's degree in Educational Administration. Although she began her journey toward educational leadership in a traditional district, she transitioned to the charter school system to turn around a failing high school as the Director of Assessment at Girls Leadership Academy of Arizona. While there, she led the school to raise proficiency rates on the AIMS Reading test from 34% to 94% and the AIMS Math from 18% to 82%. She also spearheaded the creation of the second all-girls robotics team in Phoenix. In the 2012-2013 school year, Angelica served as the Business Operations Manager at Empower College Prep and was instrumental in establishing effective and efficient systems to ensure a successful first year of operation while also managing the $1.1 million budget for the school. Additionally, Angelica managed all contracted services, developed operational school-side systems, assisted in recruiting efforts, and managed all compliance aspects of the school. During the 2012-2013 school year Angelica was accepted into the first cohort of the Aspiring Leaders Fellowship, where she gained valuable insight into effective charter school operations through monthly meetings at the Arizona Charter Schools Association and visits to excellent charter schools across the country. She was also accepted into the Charter Starter Program in December 2012, where she gained additional support and professional development focused on effective charter school operations. Angelica is passionate about ensuring students have access to excellent STEM education that teaches critical thinking and problem solving skills to prepare students for active engagement in the 21st century workforce. As Chief Operations Officer, Angelica will bring her knowledge of financial management, compliance, and creating effective and efficient systems to ensure SySTEM Phoenix has a strong operational and financial foundation.

Nicole Fernandez-Chief Academic Officer, Ex-Officio Director

Nicole Fernandez graduated from DePaul University with a double major in International Studies and Spanish. She joined Teach For America in 2005 and served as a middle school mathematics teacher in a low-income neighborhood in Central Phoenix for two years. She continued teaching as a high school mathematics teacher in the Phoenix Union High School District for an additional five years, where she redesigned traditional course structures to maximize student achievement. She spearheaded a program for her school's lowest performing math students to successfully complete Introduction to Algebra and Algebra in one year, transforming this group of struggling students into the highest performers on the Algebra final exam district-wide. Additionally, Nicole initiated a looping cycle from Algebra 2 to Pre-Calculus, which created the first class of non-honors students in the school's history to receive credit for Pre-Calculus. Nicole is constantly improving her craft as an educator and assisting her colleagues to understand the relationship between ongoing professional development and student achievement. In her role as an academic coach, she effectively utilized cognitive coaching to transform teachers into classroom leaders and reflective learners. Over the past three years, she completed a Masters in

Educational Administration at Arizona State University, been recognized as a National Board Certified Teacher, and served as chair of the Mathematics Department. Nicole has spent the past year actively developing a comprehensive blueprint for SySTEM Phoenix through Arizona Charter School Association's Aspiring Leaders Fellowship and Charter Starter Program. Nicole is dedicated to establishing a STEM-based school that translates best practices in problem-based learning into a cohesive school model. Nicole will bring her knowledge of quality instruction and professional development to SySTEM Phoenix. Additionally, as Chief Academic Officer, Nicole will utilize her expertise in the areas of curriculum and evaluation to ensure SySTEM Phoenix has an innovative, results-driven academic program.

Current Governing Board Members

SySTEM Schools recognizes that it currently has only one official board member and will require additional members to create a robust, comprehensive Governing Board. To address this need, an aggressive recruitment plan is underway to secure a diverse group of community leaders with a range of expertise in valuable areas such as finance, real estate, human resources, community engagement, STEM industries and long-term strategic planning. Future Board members will be cultivated but added only after approval by the Arizona State Board for Charter Schools. Prospective Board members will engage in board trainings and meetings to build investment and expertise in the mission of SySTEM Schools during this time. The only current voting member of the Board is Doris Roman, who brings a wealth of experience and expertise in K-12 and post-secondary STEM education, community engagement, and non-profit board governance.

Doris Roman

Doris Roman is a seasoned educator with over 25 years in STEM education with many years working with K-12 programs sponsored by universities and industry. Doris has held various positions such as Coordinator, Director, Assistant Dean, and faculty at several colleges and universities with many positions also serving K-12 programs with a focus on college and career readiness. She has served as a key player with the national MESA (Mathematics, Engineering, Science Achievement) program and served as part of the team to start the first community college program, as well as the Director during her tenure at Arizona State University (ASU). Doris retired as an administrator from higher education to take care of her terminally ill mother. She returned to the K-12 arena in 2006 with the state chapter of Communities in Schools, a national dropout prevention program serving Title 1 schools. She held positions at Excelencia Elementary and Riverside Elementary, where she worked closely with their science fairs and designed, developed, and delivered a Weird Math Club (WMC) to help students improve in math. During the 1st year of WMC operations, the students increased their math skills by over 60%. Doris has taught business and STEM courses at various colleges and with K-12 programs. In addition, she has served as a Principal Investigator on several contracts and grants helping ASU secure over $4 million in grants for STEM education. Doris has won numerous awards throughout her career, including Educator of the Year in New York, Inductee of 100 Hispanic Women, and the Martin Luther King Somos El Futuro award. She was appointed a human relations commissioner and founded a community based non-profit organization, as well as served on several governing boards, such as St. Peter's Hospital, Urban League, and Catholic Charities during her time in New York. Doris has appeared on several television and radio shows for her work in K-12 education, as well as presented at numerous national, state, and

local conferences. She moved to the southwest after she secured a grant from the National Science Foundation (NSF) to open a Southwest center for minorities in STEM education coordinated by the University of Notre Dame where she worked as the Associate Director of the GEM (Graduate Education for Minorities). After the NSF grant ended, ASU then created the position of Student Affairs Liaison Officer, during which Doris worked directly for the Dean of Engineering. Doris is committed to the empowerment of our youth, specifically our underrepresented youth who will become the future leaders of our great nation.

F. Other Charters Operated by Principals

Angelica Cruz served as the Business Operations Manager of Empower College Prep during the start up phase and first year of operation, opened in August 2012. In this role she developed the operational systems necessary to run an effective and efficient start-up school and coordinated all contracted services, in addition to managing the $1.1 million budget. Angelica also served as the Director of Assessment at Girls Leadership Academy of Arizona from 2010-2012, helping transform it from a failing school into the first public girls' school in Arizona by developing a comprehensive assessment system.