

**Request for Proposals**  
**(Application Materials Enclosed)**

**Letter of Intent Due: February 25, 2011**

**Proposals Due: March 25, 2011**

# Academy of Engineering

## REQUEST FOR PROPOSALS

Academy of Engineering: COHORT 4

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## Requests for Proposal Overview

The **Academy of Engineering (AOE)** is looking for proposals from schools interested in forming small learning communities (schools-within-schools or small stand-alone schools) for 9<sup>th</sup> – 12<sup>th</sup> grade students that are built around a broad technical core-curriculum which prepares students to pursue post-secondary engineering and engineering technology degree programs. Each Academy of Engineering must have a majority population of African American, American Indian and/or Latino students.

### PURPOSE

Academies of Engineering are designed to educate high school students in science, technology, engineering and mathematics (STEM), as well as prepare students for postsecondary engineering colleges and careers. AOE sites are supported by a strategic partnership between the National Academy Foundation (NAF), National Action Council for Minorities in Engineering, Inc. (NACME), Project Lead The Way, Inc. (PLTW), The STEM Academy (STEM 101), ConnectEd: The California Center for College and Career, and the Society for Manufacturing Engineers (SME) Education Foundation.

### LETTER OF INTENT PROCESS

Schools interested in becoming Academies of Engineering must indicate their intent to apply prior to developing a proposal. This is done by submitting an official **Letter of Intent**, accompanied by a completed **Contact Information Form**.

Up to 60 schools across the country will be selected to develop AOE's during the 2011-12 academic school year. The Letter of Intent allows the AOE partners the opportunity to offer assistance and guidance in the proposal development process.

### APPLICATION TIMELINE

**Letter of Intent DUE:** February 25, 2011

**Final Proposal DUE:** March 25, 2011

**Preliminary School Selection:** April 11, 2011

**Final School Selections:** May 30, 2011 (pending successful site visit)

**AOE Year of Planning (YOP):** 2011-12 School Year

**AOE Implementation:** 2012-13 School Year

### SELECTION CRITERIA

Schools will be selected based upon their ability to meet AOE standards. Priority will be given to urban school districts that serve high needs students<sup>1</sup> and collaborate with local industry and higher education entities in the development of proposals that demonstrate readiness to undertake this work.

Each school will receive a cumulative score based upon their application and an assessment of the following criteria:

- Site Demographics
- Commitment to providing student level impact data
- Team Development & Strong District commitment
- Curriculum & Implementation vision

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<sup>1</sup> High schools with high needs populations include, but are not limited to, high schools with: 1) 50% or more students on free or reduced priced lunch; 2) 65% or more students that are African Americans, Hispanics and/or American Indians; 3) graduation rates lower than the national average and/or 4) state/national scores lower than state average.

## Background

In response to a growing national need to educate students in Science, Technology, Engineering and Math (STEM) and to meet the increasing demand for qualified employees in the field of engineering and engineering technology, the **National Academy Foundation (NAF)**, in partnership with **Project Lead The Way, Inc. (PLTW)** and the **National Action Council for Minorities in Engineering, Inc. (NACME)**, developed an Academy theme in engineering in 2007. The partnership has since expanded to include **The STEM Academy (STEM 101)**, **ConnectEd: The California Center for College and Career**, and the **Society for Manufacturing Engineers (SME) Education Foundation**. The initiative is designed to benefit from the core capacities of the collaborating organizations in support of school and partner efforts at the local level.

The Academy of Engineering (AOE), which will exist as a school-within-a-school, stand alone school or small learning community in public high schools nationally, will be organized as a career-themed small learning community, using the National Academy Foundation's *Academy Development Model*, and designed to deliver the PLTW® "*Pathway to Engineering*" high school curriculum or The STEM Academy® Foundation high school curriculum, respectively supported by integrated engineering units developed by ConnectEd. Additionally, the AOE will leverage the industry partnerships and postsecondary transition supports of the National Action Council for Minorities in Engineering to open pathways to engineering to underrepresented youth, in our nation's urban centers and other appropriate educational settings around the United States.

The AOE is designed as a 9<sup>th</sup> – 12<sup>th</sup> grade initiative with a solid academic foundation, adhering to national and state standards in mathematics, science, technology, communication, and social studies. The content of its courses will support a broad technical core, equipping students to pursue specialization in postsecondary engineering and engineering technology degree programs.

The goals of AOE will be to:

- Recruit and encourage more high school students to choose careers in engineering and engineering technology;
- Increase the participation of women and underrepresented minorities in the study of engineering; and
- Prepare high school graduates to enter postsecondary engineering and engineering technology programs fully competent in required mathematics, science, and technical subjects.

The AOE Partners have opened 29 AOE sites and this year 28 additional schools have entered into the Year of Planning (YOP) program. The initiative will grow to a national network of 110 academies by 2012.

## The Partnership



### NAF

The National Academy Foundation (NAF) creates partnerships between business leaders and educators who have been transforming students' lives for more than 25 years. Through an innovative educational model, NAF's small public school-based "learning communities" empower high school students to successfully go on to higher education, professions of their choosing and active community participation.



### NACME

Since 1974, the National Action Council for Minorities in Engineering, Inc. has worked with America's leading corporations to sustain and increase the pool of minority students from underrepresented communities who seek careers in engineering. As the largest private provider of scholarships for underrepresented minority students in engineering, NACME has provided more than \$120 million in scholarship and support services to more than 22,000 African American, Latino and American Indian students at 160 colleges and universities. These students have gone on to assume important roles in our nation's engineering workforce. The success of NACME is evidenced in the 81 percent retention rate of its scholars.

NACME will bring the above resources of scholarships, teacher grants, STEM awareness materials and industry and higher education connections to each of the Academies of Engineering. NACME will work closely with its partners, the school, the community and the corporations and engineering schools in the area to institute these enhancement programs in the most optimum way to support the needs of the students, the parents, the teachers, counselors, and the community.



### PLTW®

Project Lead The Way, Inc. (PLTW®) is a national, not-for-profit, engineering program found in 3000+ secondary schools in all 50 states. The program consists of eight high school engineering courses with contemporary, project-based curricula, grounded in intensive professional development for classroom instructors. Based on a partnership model, Project Lead The Way, Inc. has succeeded in building strong alliances with higher education, business and state departments of education.

Teachers complete two weeks of professional development at one of the 30 Project Lead The Way, Inc. affiliate university sites nationwide and participating schools secure annual software leases through the organization at significant savings. Project Lead The Way, Inc. provides at no charge to schools its curriculum, ongoing professional development and technical assistance.



The STEM Academy® is a national non-profit status education K-14 program. The curriculum is rigorous, innovative and comprehensive and was collaboratively developed by K-12 teachers, university educators, industry partners, engineering and biomedical professionals. Curriculum culminates with students applying real-world application of their STEM education with hand-on

activities and maps to state and national standards. Concrete evidence can be provided that the practices, strategies, and programming utilized within The STEM Academy® K-14 curriculum will improve under-represented minority and low-income student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates and improve teacher and principal effectiveness.



**ConnectEd: The California Center for College and Career**

Founded by the James Irvine Foundation in 2006, ConnectEd: The California Center for College and Career is dedicated to advancing practice, policy, and research aimed at helping young people prepare for both college and career through Linked Learning—a high school improvement approach. ConnectEd's mission is to support the development of Linked Learning by which California's young people can complete high school, enroll in postsecondary education, attain a formal credential, and embark on lasting success in the world of work, civic affairs, and family life.

ConnectEd has developed four "integrated curriculum units" for AOE that are lessons designed and delivered via a multidisciplinary team that make meaningful connections for students across subject areas. English, mathematics, science, social studies, and career technical teachers collaborate to plan and present these lessons that center around an engineering focused issue or problem.



**SME Education Foundation**

The Society for Manufacturing Engineers (SME) Education Foundation inspires youth to pursue careers in manufacturing, supports students studying for a career in an engineering-related field and prepares these students to participate in a global economy. The SME Education Foundation provides funding for a week long day camp for 6th - 8th graders called Gateway Academy which is a project based, hands-on curriculum designed by Project Lead The Way® (PLTW) to introduce middle school students to the fundamentals of science, technology, engineering and math.

Campers work together in a fun, exciting environment using leading-edge technologies to sample such disciplines as robotics, aeronautics and eco-design. They brainstorm ideas, solve problems and build bridges, race cars and other working models.

## Core Beliefs

Among careers that require at least a Bachelor's degree, the Bureau of Labor Statistics estimates that two of the ten fastest growing occupations between 2006 and 2016 will be related to engineering.<sup>2</sup> The potential for employment, as well as opportunity to collaborate with leading engineering and educational partners such as Project Lead The Way, Inc. (PLTW<sup>®</sup>), The STEM Academy<sup>®</sup>, the National Action Council for Minorities in Engineering, Inc. (NACME), ConnectEd: The California Center for College and Career and the Society for Manufacturing Engineers (SME) Education Foundation make engineering an exciting expansion opportunity for NAF. This partnership has the potential to create a strong pipeline from high schools to college engineering programs and into engineering professions.

The Academy of Engineering will help address the following national issues:

- A projected shortage of new engineers and technologists over the next decade.
- Inadequate numbers of students in college engineering and engineering technology programs.
- Disproportionately low numbers of women, African-Americans, Hispanics and American Indians in the engineering workforce and in college engineering programs.
- Too few high school programs designed to interest a *diverse* student population in engineering careers and to adequately prepare those students for college programs in engineering and engineering technology.

An AOE will build long-term capacity, improve the technological literacy of all students (since not all AOE graduates will become engineers or technologists), and provide all members of our diverse population with opportunities to pursue rewarding careers in engineering and technology.

### **A Collaborative Effort**

Each of the partnering organizations has a strong organizational history and unique capacities to contribute to the AOE initiative. In general, NAF is providing the school organizational model and leadership to the initiative, PLTW<sup>®</sup>, The STEM Academy<sup>®</sup> and ConnectEd are providing engineering curriculum and professional development, and NACME is providing industry relationships and post-secondary transition supports. The Society for Manufacturing Engineers (SME) Education Foundation is providing opportunities for middle school students to participate in the Gateway Academy Summer camp which introduces them to the fundamentals of science, technology, engineering and math.

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<sup>2</sup> Computer applications engineers and computer systems engineers. See [www.bls.gov/oco/ocotjt1.htm](http://www.bls.gov/oco/ocotjt1.htm)

## Academy of Engineering Requirements

The guidelines for the Academy of Engineering (AOE) mandate that the AOE's must satisfactorily meet the following criteria. By submitting this proposal and accepting admittance to develop an AOE, all academies and their respective school districts must agree to:

### Site Demographics

1. Exist as stand-alone schools, schools-within-a-school, or serve as a small learning community in an urban school or other appropriate educational setting for 9<sup>th</sup> – 12<sup>th</sup> grade students.
2. Have between 60-100 students per grade organized as a discrete cohort for most classes.
3. Meet and maintain a demographic enrollment of 65% or more African American, Hispanic and/or American Indian students.
4. Be open to students of all academic abilities, and will not be selective for only the top students of a high school or community.
5. Maintain an agreed-upon policy for admission to programs where a student expresses interest in the theme and enrolling in the school.

### Leadership

6. Have a degree of autonomy negotiated with school district and significant budget authority.
7. Have a separate leader who will be designated as the Academy Director and independent, dedicated staff across all disciplines.
8. Recommend teachers from its district for participation in the Project Lead The Way, Inc. faculty development program (PLTW<sup>®</sup> teachers must have as a minimum a Bachelor's Degree) or in The STEM Academy<sup>®</sup> Summer Instructor Training Boot Camp program.
9. By the end of the second year, establish a local advisory board of engineering businesses and higher education institutions, which will advise on curriculum adaptation and design, provide opportunities for site visits, job shadowing, mentors, and other methods of career education, and will provide paid internships for students during the summer before the senior year. The objective of the Partnership Team is to provide optimal support for teachers and students and to facilitate the operation of the entire AOE in the School District. This meets the PLTW<sup>®</sup> partnership team requirement.
10. Designate staff time to support the inclusion of NACME Board companies' employees (where applicable) in the AOE Advisory Board.

### Curriculum & Implementation

11. Have a STEM theme: the academy will center its course curriculum on science, technology, engineering and math.
12. Represent a coherent program of study, and will not be a set of elective or drop-in courses.
13. Create a cross disciplinary team of teachers (including Math, English, Social Studies, Science and Engineering) to work together to deliver integrated curriculum specifically the integrated Engineering units developed by ConnectEd.

14. Offer its students at least four (4) PLTW<sup>®</sup> courses or (4) The STEM Academy<sup>®</sup> courses within four (4) school years from the date that it commences.
15. Ensure student's concurrent enrollment in a college preparatory mathematics course shall be a prerequisite for a student's enrollment.
16. Provide supplemental mathematics instruction developed by ConnectEd (Algebra Through Engineering) prior to, and during, Grade 9 for entering AOE students with deficient math achievement.
17. Use the software designated exclusively in teaching all PLTW<sup>®</sup> program courses.
18. Purchase a laptop computer and software (each meeting the specifications established for each of its teachers accepted into the Project Lead The Way, Inc. faculty development program.) The School District agrees that the laptop computer and software shall remain in the possession of and be for the sole use of the teacher as long as the teacher is teaching AOE program courses.
19. Assure that the School District's facilities properly support the program standards by agreeing to only purchase or lease equipment and software for the AOE from an approved list provided by PLTW<sup>®</sup>/AOE.

### **Performance & Evaluation**

20. Data collection, review and follow-up actions are essential to the AOE program. NAF has developed a partnership with ConnectEDU to ensure that the data needed to track program quality and student success are collected and reported on to Academies on a routine basis. Our partnership with ConnectEDU will enable NAF to follow students into college to track their higher education experience.

Since NAF and our partner organizations require that various data are collected throughout the year to track and report program quality and student academic standing, we have determined that our partnership with ConnectEDU (CDU) will enable data collection throughout the year without contacting the academy for each request. The data results will be reported to the academy for the purpose of making program improvements and assessing fidelity to the AOE model as well as comparing the academy to others in the cohort.

#### **A sample of student level data NAF collects is as follows:**

- demographics including gender, race/ethnicity,
- at-risk factors including FRL, overage and under credited, 8<sup>th</sup> grade data
- test scores for Algebra and ELA, and PLTW courses
- retention rates of students within the academy
- credit accumulation at each grade level
- SAT/ACT scores
- Graduation rates of the AOE academy by cohort.
- College application and college acceptance
- NAF will administer a perception survey to students

21. NAF will be collecting alumni data for AOE students, and your academy will be expected to provide information about academy graduates. ConnectEDU has an alumni tracking system that can support this requirement.
22. NAF and our partner organizations reserve the right to share FERPA compliant data with funders, corporate partners, and other school communities.

**Professional Development**

23. Ensure professional development for teachers. The classroom teacher is by far the most significant factor in the educational process, but very few high school teachers have any experience or training in engineering or the math or science that is involved with engineering. With that in mind in order to fully implement the Academy of Engineering model, AOE teachers will be involved in the following required math and Integrated Units professional development delivered by ConnectEd; however, not all AOE teachers (i.e.: ELA teachers) will be required to teach math concepts.

- Algebra Through Engineering
- Integrated Units (IED™, POE™, Digital Electronics™, Aerospace Engineering™)

24. Agree to fund the professional development, and ensure participation of instructors in a multi-phase professional development program prior to their instruction of their courses:

**a. Pre-Summer Training Institute Assessment**

- i. Ensure teachers complete an online pre-assessment prior to participating in PLTW® Summer Training Institute (STI), the results of which inform that learning process.

**b. PLTW® Summer Training Institute or The STEM Academy® Summer Instructor Training Boot Camp**

- i. **For PLTW®** - ensure teachers attend two-week Summer Training Institute, for each course that the instructor will teach. If during the Year of Planning no PLTW course will be taught until the Fall of 2013, then it is not necessary to attend the two-week Summer Training Institute until Summer 2013. Teachers will have access to the course curriculum upon completion of the training.
- ii. **For The STEM Academy®** - ensure teachers who will be leading classroom instruction for Foundation courses attend a five day Summer Instructor Training Boot Camp. If during the Year of Planning none of The STEM Academy® courses will be taught until the Fall of 2013, then it is not necessary to attend the 5 day Summer Instructor Training Boot Camp until Summer 2013. Teachers will have access to the course curriculum to prepare for the training.

**c. Institute Staff Development**

- i. Attend annual Institute for Staff Development. At least two teachers and/or administrators from each Academy must attend.
- ii. Ensure counselors attend a comprehensive 2-day Counselor and Leadership Conference held annually for the AOE cohort schools. This also meets the PLTW® Counselor Training requirement.

## Academy Development: The Year of Planning (YOP)

Because advanced planning and engagement of all members of the Academy team—from teachers, to administrators, to business partners—is essential to a successful Academy launch, new AOE sites will undergo a structured year-long Academy Development Process. This guided technical assistance enables a school interested in starting an Academy of Engineering to begin the start-up process with assistance from NAF prior to enrolling students. Schools applying for this designation agree to take part in a self-assessment process aimed at developing a year-long plan for academy development.

Planning is rigorous and time-consuming work; therefore a diverse planning team must be organized to meet planning requirements and to ensure no individual is overwhelmed by the tasks. The Year of Planning will provide sufficient time for schools to organize as a small learning community, select and train instructors and recruit students for the initial class.

Upon acceptance as an AOE site, completion of the NAF and PLTW<sup>®</sup> or The STEM Academy<sup>®</sup> Agreements, and payment of the (YOP) Services Fee, the school will be entitled to NAF and PLTW<sup>®</sup> or The STEM Academy<sup>®</sup> technical assistance, staff development activities, and use of curriculum and other benefits associated with AOE network membership.

Each school accepted as an AOE site will receive a *Year of Planning Guidebook*, which provides detailed outlines of AOE startup activities, as well as a set of deliverables and accompanying tools and strategies for Academy Planning Teams. Technical assistance through NAF and PLTW<sup>®</sup> or The STEM Academy<sup>®</sup> professional development conferences, web conferences, and ongoing consultation with NAF Regional/State Directors and Field Services Managers will help Academy Planning Teams with this process.

Upon successful completion of the academy development process, the school's Academy will be granted full membership status, fully prepared to launch and operate their Academy successfully.

The academy development process is a synergistic effort. Each school and district not only works with NAF to develop its year-long plan, but also collaborates with other schools to share their experiences and support each other. Schools establish lasting relationships during the startup year that will benefit their Academies in the years ahead.

We understand that for most schools, planning is a luxury. Thus, it is our intention through the AOE process to make planning a requirement, giving schools and districts ample opportunity to create the appropriate environment for planning to take place. During this process, schools and districts follow a planned sequence of activities that will allow them to align and integrate resources and programs to serve both the Academy implementation and broader school improvement.

## Letter of Intent Process

Schools interested in becoming Academies of Engineering must indicate their intent to apply prior to developing a proposal. This is done by submitting an official **Letter of Intent**, accompanied by a completed **Contact Information Form**.

Up to 60 schools across the country will be selected to develop AOE's during the 2011-12 academic school year. The Letter of Intent allows the AOE partners the opportunity to offer assistance and guidance in the proposal development process. Schools and districts are strongly encouraged to contact NAF with any questions or for clarification at any point in the proposal development process.

### Requirements

The Letter of Intent should be no longer than three pages and must include all of the following elements:

- Name of the applying school and district
- Name and title of the Academy Director (if known)
- An expressed commitment by district/school staff and faculty to engage in the Academy planning effort and to participate in the Year of Planning process
- A brief listing of key steps taken to date, as well as issues, challenges, and resolutions that have arisen to indicate that the school site and school district are indeed very serious about the work of creating and implementing an Academy of Engineering
- School and district demographic data
- School and district administrator signatures
- Completed Contact Information Form

**Letter of Intent/Contact Form should be submitted by February 25, 2011 via e-mail or postal mail to:**

Delivered (not postmarked) by **5 p.m., EST, February 25, 2011** to:  
AOE Partnership  
National Academy Foundation  
218 West 40<sup>th</sup> Street, 5<sup>th</sup> Floor  
New York, NY 10018  
(212) 635-2400  
bbarry@naf.org

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## Contact Information Form

(Required with submission of Letter of Intent)

*Please print or type information.*

**DIRECTOR INFORMATION:**

*Please fill out the below information for the Academy Director, or primary contact if a Director has not been*

Name \_\_\_\_\_ Professional Title \_\_\_\_\_  
Employer \_\_\_\_\_  
Work Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_  
Work Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

*(The person listed as Academy Director will receive all correspondence based on the information listed below and will be responsible for distributing communications as necessary.)*

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**PRINCIPAL INFORMATION:**

*Please fill out the below information for the school's principal.*

Name \_\_\_\_\_ Professional Title \_\_\_\_\_  
School Name \_\_\_\_\_  
School Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_  
School Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

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**SUPERINTENDENT INFORMATION:**

*Please fill out the below information for the district superintendent.*

Name \_\_\_\_\_ Professional Title \_\_\_\_\_  
School Name \_\_\_\_\_  
School Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_  
School Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

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**Please identify any existing engineering program:** \_\_\_\_\_Project Lead The Way \_\_\_\_\_MESA \_\_\_\_\_Other

(If other, please specify \_\_\_\_\_)

**The School is a:** \_\_\_\_\_Charter \_\_\_\_\_Career-Technical Center \_\_\_\_\_Magnet \_\_\_\_\_Comprehensive \_\_\_\_\_Other

If other, please specify \_\_\_\_\_

<b>February 2011</b>	<ul style="list-style-type: none"> <li>Letter of intent and contact information sheet are due by February 25, 2011.</li> </ul>
<b>March 2011</b>	<ul style="list-style-type: none"> <li>RFP due back to NAF no later than March 25, 2011.</li> <li>The school/district will register with curriculum provider online at <a href="http://www.pltw.org/how-to-join.cfm">http://www.pltw.org/how-to-join.cfm</a> or <a href="http://www.stem101.org/registration">www.stem101.org/registration</a>.</li> <li>AOE Partners screen proposals.</li> <li>Pilot sites conditionally approved and site visits scheduled.</li> </ul>
<b>April – May, 2011</b>	<ul style="list-style-type: none"> <li>Pilot sites visited to confirm capacity and readiness and conduct orientation to the NAF Academy Development (YOP) Process.</li> <li>Schools sign NAF YOP Services Agreement.</li> <li>School organizes Planning Team.</li> <li>Register for Institute for Staff Development.</li> <li>School selects and registers a teacher for professional development.</li> </ul>
<b>Following Site Visit</b>	<ul style="list-style-type: none"> <li>School completes Academy Readiness Profile and a gap analysis of existing equipment and orders lacking equipment.</li> <li>School signs and returns PLTW® or The STEM Academy® Software Lease Agreement and leases required software.</li> </ul>
<b>Summer 2011</b>	<ul style="list-style-type: none"> <li>Teacher(s) attend PLTW® Summer Training Institute or The STEM Academy® Summer Instructor Training Boot Camp if the academy will be teaching a PLTW course in the Fall of 2011.</li> <li>Planning team (teachers, school leaders, district staff and business partners) attend YOP work session at NAF Institute for Staff Development in July.</li> </ul>
<b>Fall 2011</b>	<ul style="list-style-type: none"> <li>Classes commence for Cohort 4 academies as part of the YOP training. Teachers begin using the PLTW® Virtual Academy or The STEM Academy® National Professional Learning Community, as needed.</li> <li>Integrated academic/engineering modules developed and piloted throughout school year.</li> <li>AOE Planning Activities including web-conferences, on-site visit, and development of programmatic deliverables.</li> <li>First local advisory board convened.</li> </ul>
<b>Winter 2011 - 2012</b>	<ul style="list-style-type: none"> <li>Finalize program of study, student recruitment plans and class schedule requirements.</li> </ul>
<b>Winter- Spring 2012</b>	<ul style="list-style-type: none"> <li>Conduct student recruitment; develop school schedule supportive of academy goals and program integrity.</li> <li>Staff selection and orientation.</li> <li>Academy accepts students (minimum of 60-100) into 9<sup>th</sup> grade cohort.</li> </ul>
<b>Summer 2012</b>	<ul style="list-style-type: none"> <li>Teams attend professional development institutes.</li> </ul>
<b>Fall 2012</b>	<ul style="list-style-type: none"> <li>First AOE 9<sup>th</sup> grade cohort begins.</li> </ul>
<b>2012- 2016</b>	<ul style="list-style-type: none"> <li>One grade per year is added to academies through graduation and full academy implementation.</li> </ul>

## Funding and Yearly Costs

### Staffing Costs:

Covered by each school through regular budget.

### NAF-Annual Fees

#### Year of Planning Services Fee

NAF has a standard \$6,000\* Academy Development/Year of Planning Services Fee

#### Annual Membership Fee

\$1,000\* comprehensive fee for NAF services and materials beginning in the 2012-2013 academic year.

#### Professional Development

Institute for Staff Development: \$550+ \* per person for registration

- Prepayment option for 2 Planning Team members for two Institutes is \$6,000\*
- Prepayment option for 4 Planning Team members for two Institutes is \$13,800\*

Leadership Summit (TBD): Travel, lodging and registration for Planning Team. Teacher stipend at the discretion of the sending school.

*\*Subject to change*

#### Academy Development Visits

No Charge

### PLTW® Annual Participation Fees

#### Teacher Professional Development

Varies according to training site; \$2,500 to \$3,500 for two week summer training (includes room, board, registration). Teacher stipend at the discretion of the sending school. Laptop computer required (\$1,500 to \$2,000).

#### Annual Software Lease Agreement

Required software bundle \$3,995. Computer Integrated Manufacturing course bundle \$1,600.

#### Fischertechnik Modeling Components

\$7,500 per section of Principles of Engineering course

#### Computers, Printers and related

\$50,000 to \$60,000 for class lab \*(if currently no lab)

#### Miscellaneous Equipment, Supplies

\$15,000 to \$20,000 first year; \$1,500 to \$3,000 annually

#### Curriculum

No Charge

#### Virtual Academy

No Charge

#### Technical Assistance

No Charge

Marketing Materials	No Charge
Purchasing Manual	No Charge
Counselor Conference	No Charge other than travel and hotel costs

\*Costs are reduced depending on a school's existing inventory of equipment and supplies which meet PLTW® instructional specifications.

## The STEM Academy® Annual Participation Fees

<b>Teacher Professional Development</b>	\$1,750.00 for 5 day summer training. Teacher stipend at the discretion of the sending school.
Program Update	Optional program update includes software and curriculum for \$5,000.00 per site (24 student lab).
Computers, Printers and related	\$50,000 to \$60,000 for class lab *(if currently no lab)
Curriculum	No Charge
National Professional Learning Community	No Charge
Technical Assistance	No Charge
Marketing Materials	No Charge
Purchasing Manual	No Charge

\*Costs are reduced depending on a school's existing inventory of equipment and supplies which meet The STEM Academy® instructional specifications.

## NACME Annual Participation Fees

**No Charge for initial distribution of materials, charge per piece thereafter.**

NACME will provide engineering awareness materials (listed below) for students, parents, teachers and counselors at no cost for the first ninth grade class in the Academy of Engineering.

**Any additional materials requested by schools will bear a \$15 per toolkit charge.** This charge assesses a portion of printing and shipping & handling costs for NACME. Materials will also be available at no cost electronically online at [www.nacmebacksme.org](http://www.nacmebacksme.org)

### NACME Toolkit (subject to change)

1. NACME "Engineering Your Future" Magazine (engineering publication for students)
2. NACME Guide to Engineering Colleges (engineering publication for students/parents, English & Spanish)
3. Guaranteed 4.0 - 5 Cs of Learning (note taking resources for students/parents – English & Spanish, and DVD)
4. Student Take Home Poster (22" x 34" engineering themed poster)
5. Student AOE Bags (string bag with AOE logo)

**Free of Charge Resources (limited quantities, available upon request)**

Five Step Poster for Counselors and Teachers

Guaranteed 4.0 Classroom Pack for Teachers

Middle School Student/Parent/Teacher Engineering Awareness Brochures

## 2011-2012 RFP Application Process

*Letters of Intent must be submitted prior to completing this proposal (see page 11). When submitting your proposals, please answer ALL questions in their entirety and submit all applicable attachments at one time.*

### REQUIREMENTS

Be sure your proposal includes all of the components below:

- Title Page
  - Name of applying school and district (the same information as provided in the Letter of Intent)
  - Name of Academy Director
  - Primary phone number and email address for Academy Director
- Completed application (Part I and Part II)
- Letters of support: At least three letters of support from a business partner, college or university, local intermediary organization, government agency, or community partner is required. The letters should indicate a desire to support the program through its start-up and a clear commitment to participate in ongoing planning activities.
- A letter of support from the Superintendent.
- Signed PLTW<sup>®</sup> School District Agreement
- Registration with PLTW<sup>®</sup> online at <http://www.pltw.org/how-to-join.cfm> or with The STEM Academy<sup>®</sup> online at [www.stem101.org/registration](http://www.stem101.org/registration)

**\*\* Incomplete applications will not be considered.**

### Full Proposal Application

\*\*Please be sure to send one digital proposal (PDF) via e-mail or on CD.

Delivered (not postmarked) by **5 p.m., EST, March 25, 2011** to:  
AOE Partnership  
National Academy Foundation  
218 West 40<sup>th</sup> Street, 5<sup>th</sup> Floor  
New York, NY 10018  
[bbarry@naf.org](mailto:bbarry@naf.org)  
(212) 635-2400

## RFP Application Part I

### BACKGROUND INFORMATION

*(Be sure to answer all questions. Incomplete applications will not be processed. If completing on a separate piece of paper, questions MUST BE numbered and answered in order)*

#### 1. DEMOGRAPHIC STATISTICS AND OVERVIEW OF COMMUNITY

Please include size, ethnic composition, number of high schools, etc.



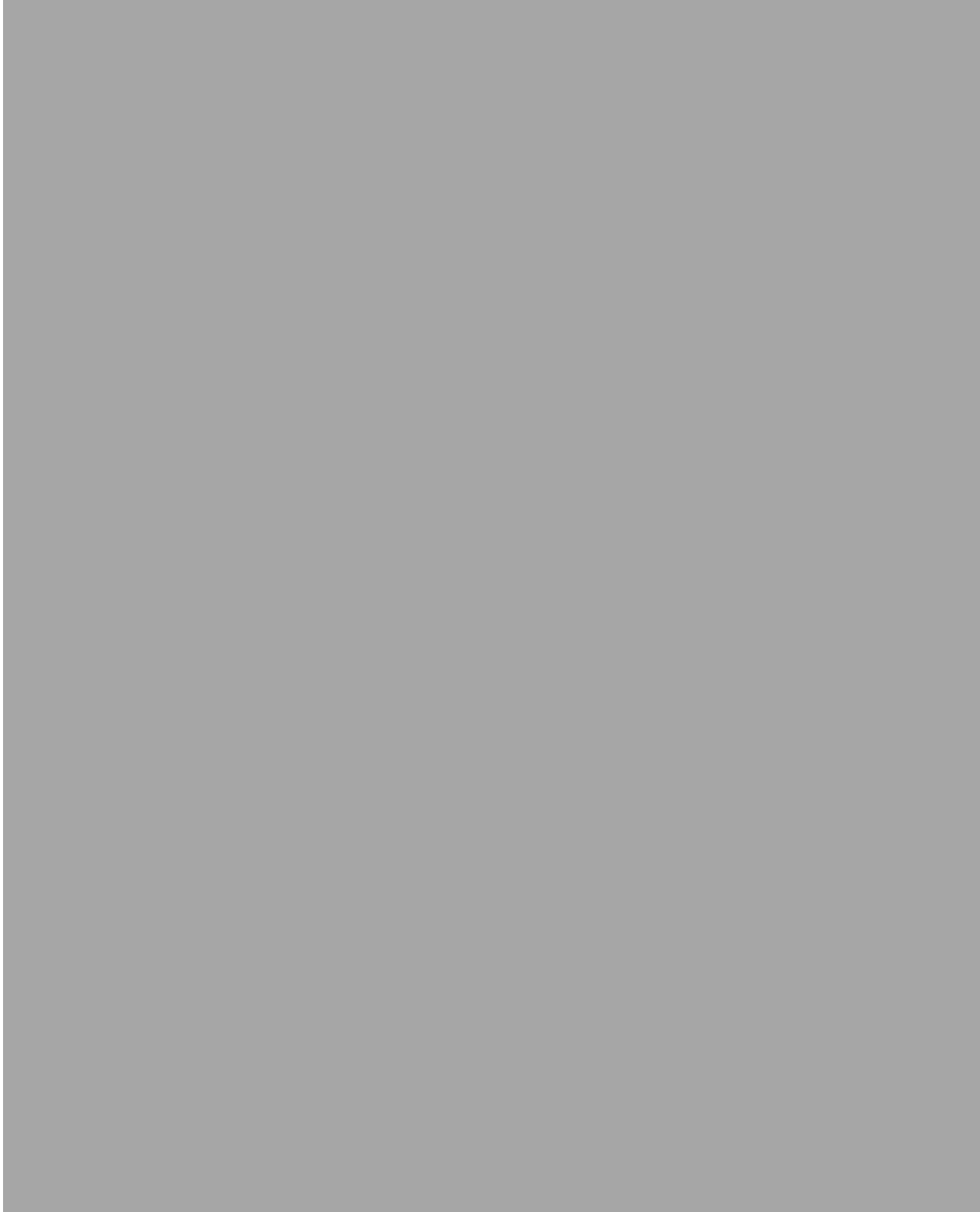
#### 2. DISTRICT PROFILE

Please include population, ethnic representation, academic performance (i.e.: GPA and test scores), graduation rate, etc.

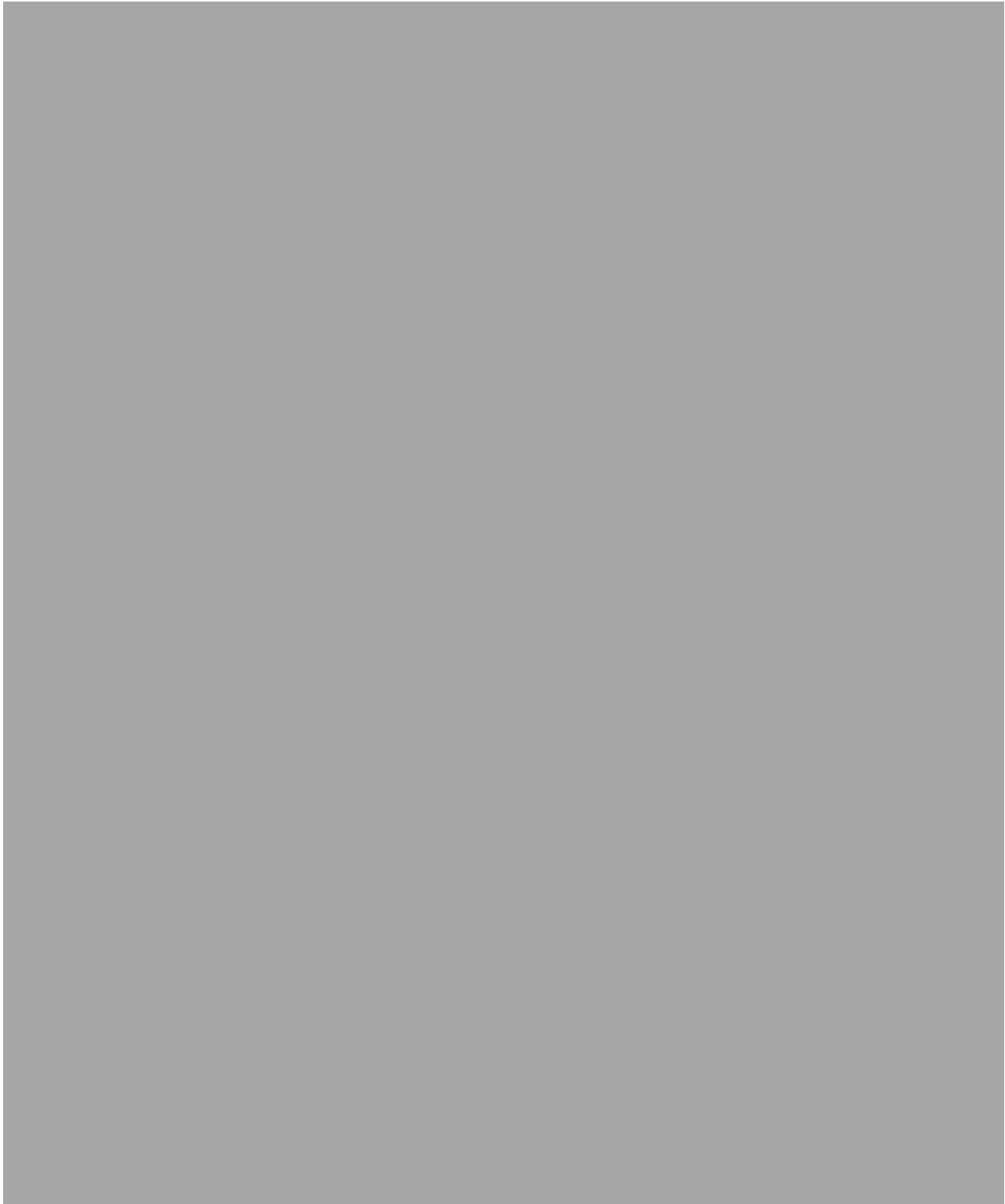


#### 3. SCHOOL PROFILE

Population, ethnic representation, academic performance (i.e.: GPA and test scores), graduation rate, years in existence, other academies being implemented, etc.



4. **DISCUSS** resources already in place and supports that may be needed to implement the AOE model.



**5. Local/Regional Workforce Needs**



**6. At least three windows of dates that would be available for your school site to host a one-day AOE conditional site visit (between April and May, 2011)**

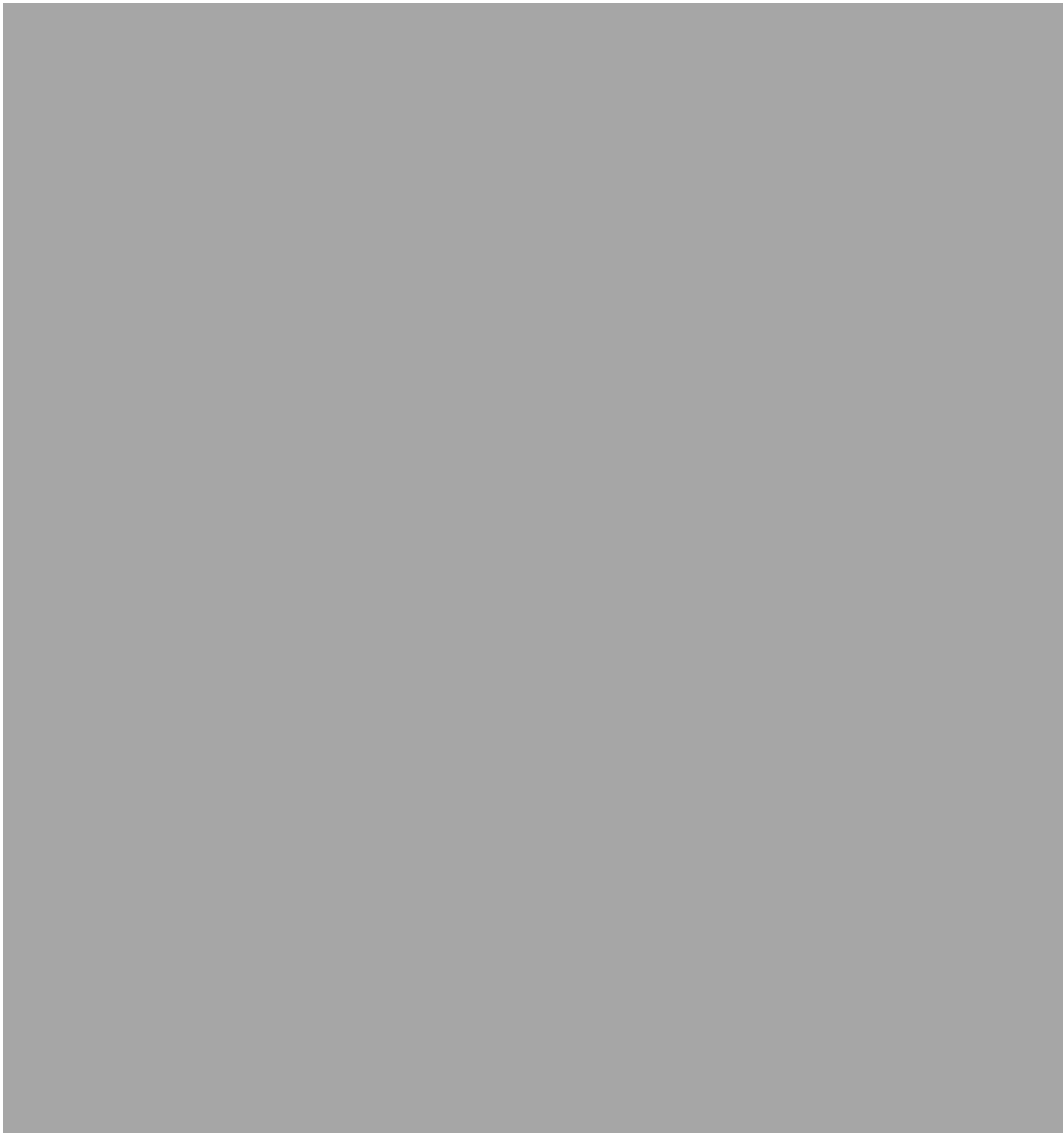
1.
2.
3.

## RFP Application Part II

### FUNDAMENTAL INFORMATION

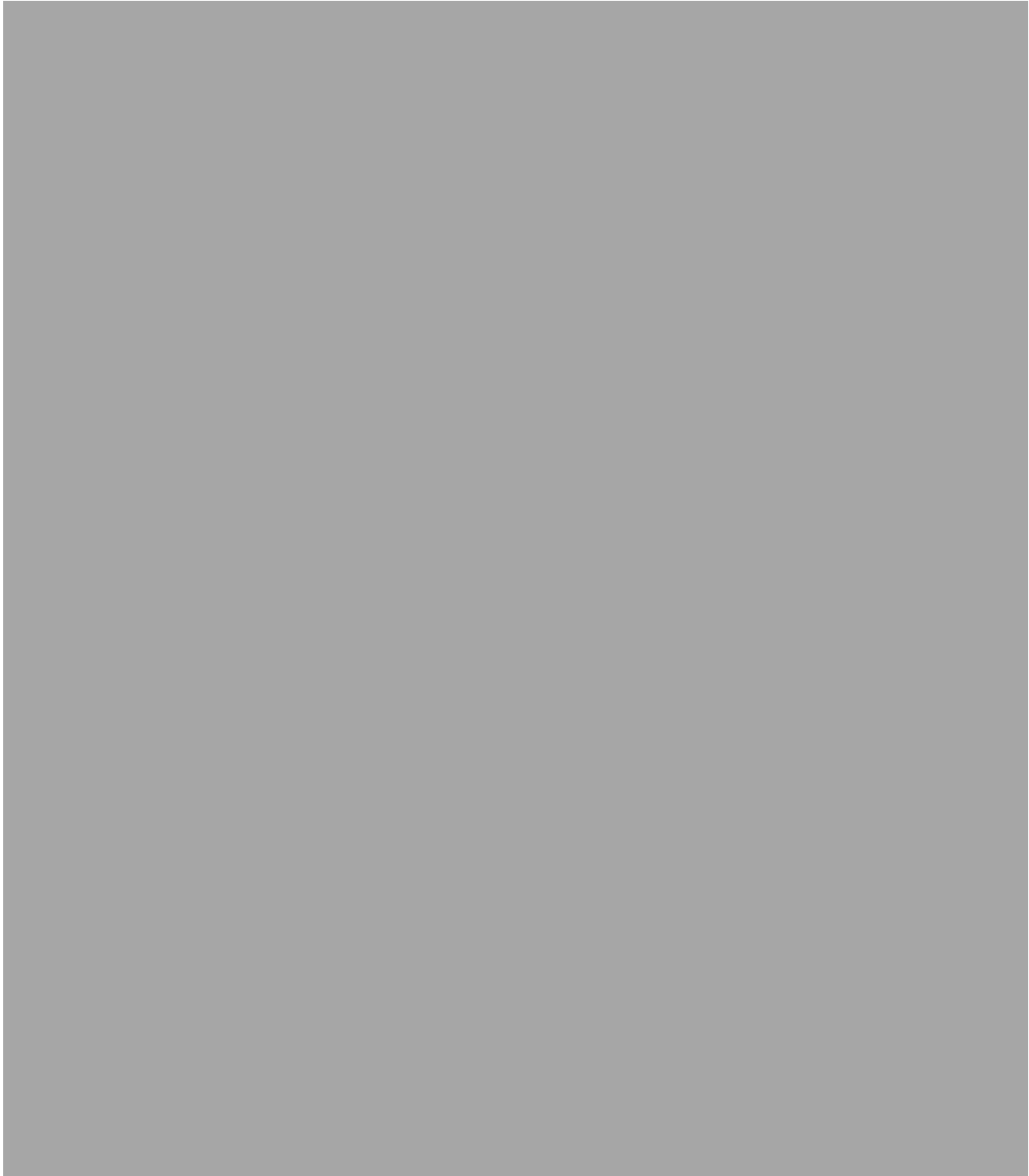
*(Be sure to answer all questions. Incomplete applications will not be processed. If completing on a separate piece of paper, questions MUST BE numbered and answered in order)*

1. Why do you want to become an AOE at this time?

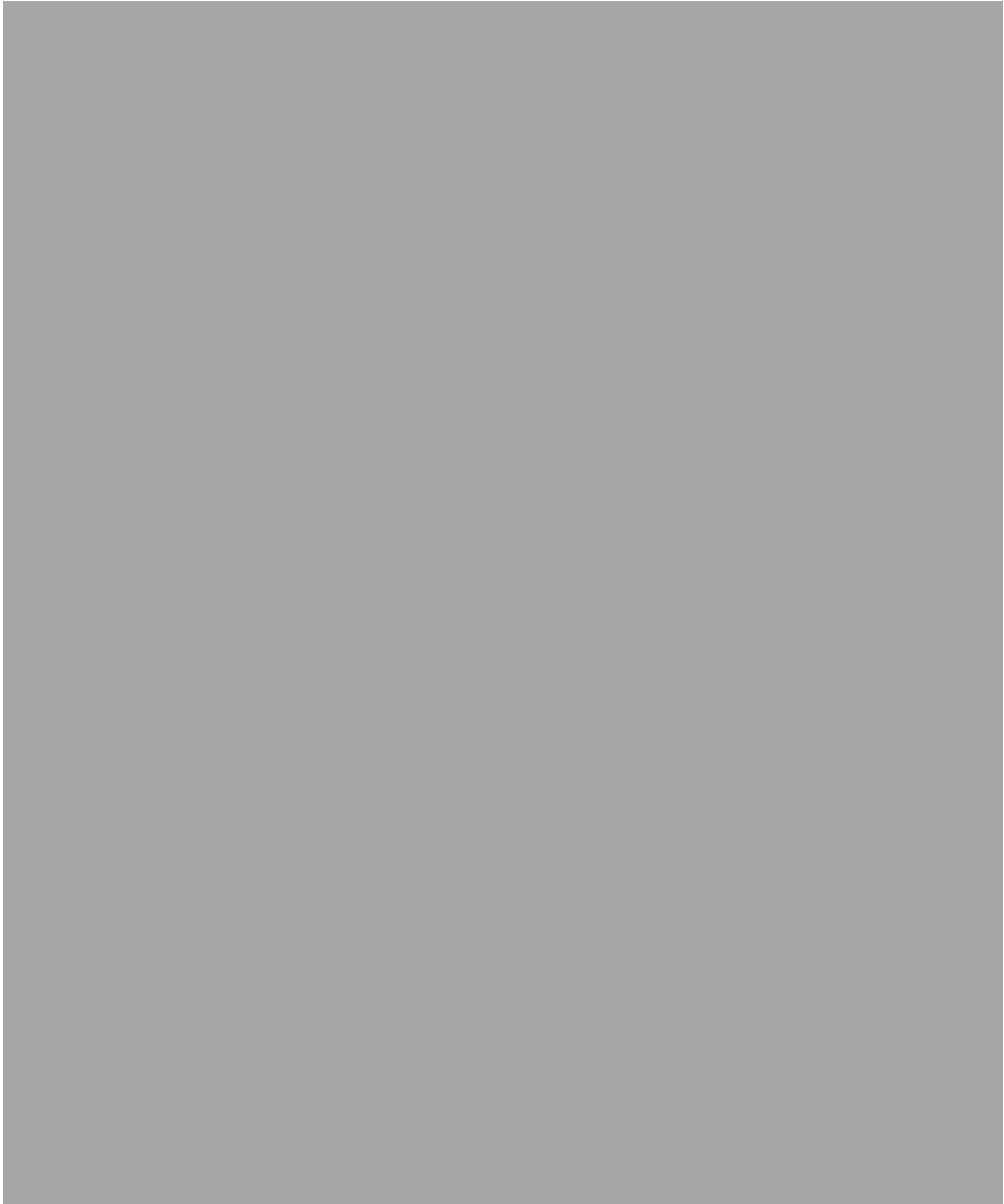


**2. What is the vision for the applying AOE?**

- Mission statement
- How will your AOE model impact the school/community and students/ teachers, school district?
- How will your academy exhibit equity within your student population?
- Strategies to implement your AOE Model's expectations

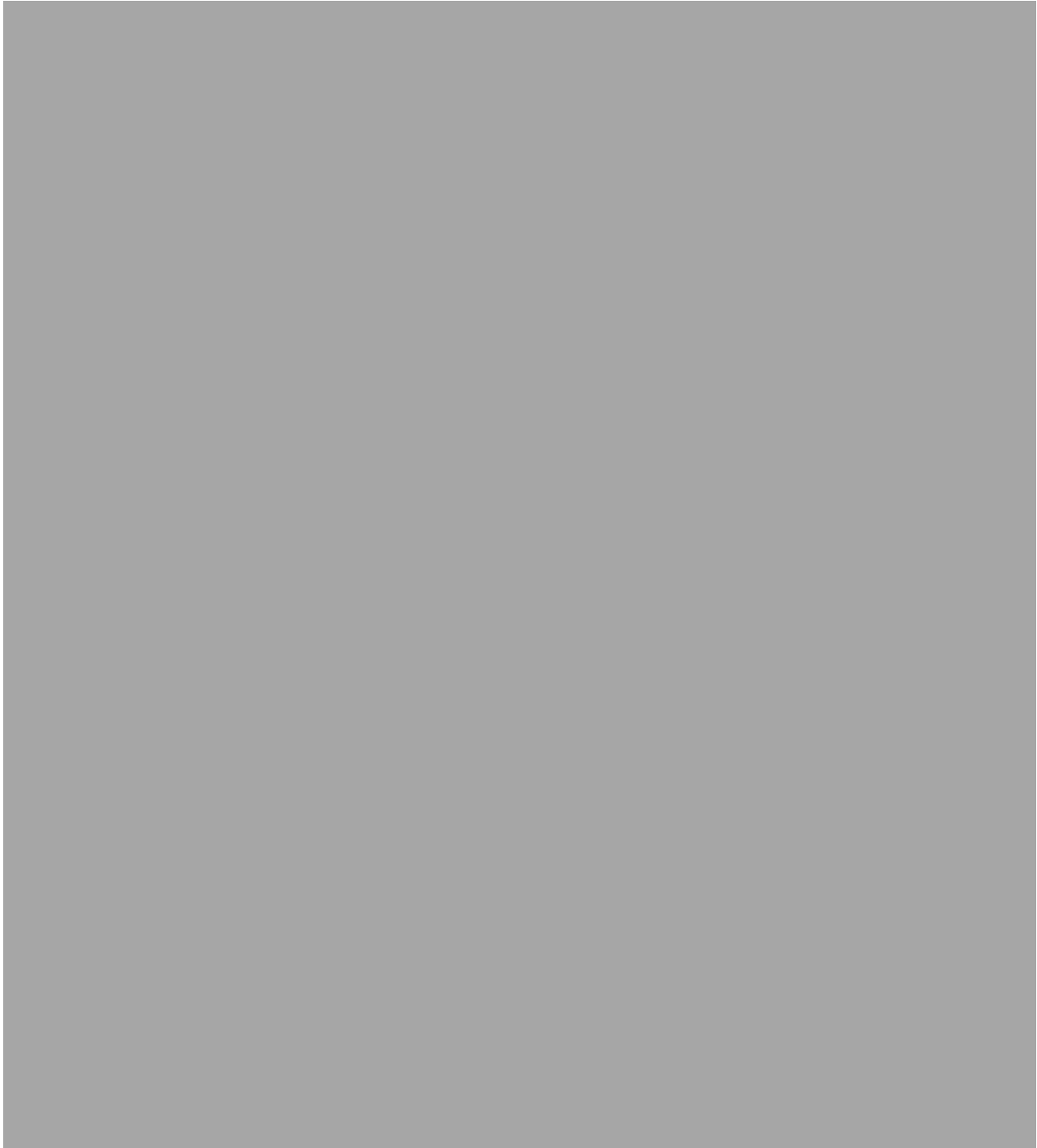


3. **Members of the Planning Team (Please include backgrounds and affiliations of team members as well as team members' roles and expectations)**



**4. How committed to and ready for planning is the team?**

- Resources, funding, agreements in place
- Specific roles assigned
- Planning Time Available
- Experience learned from previous efforts
- Other evidence



## 5. Letters of Support

Be sure to include at least three letters of support from the following stakeholders:

- Business
- Community Partner (Post-secondary, non-profit, civic leader)
- Alumni/Parents

Be sure to include at least one letter of support from the District office in your school system:

- This letter should be signed by either the Superintendent or his/her designee. The letters of support should indicate the readiness, willingness and the level of support that your supporting stakeholders are willing to contribute to the work of establishing a new Academy of Engineering.

A completed Year of Planning™ Proposal must include all of the following elements:

### Title page

- Name of school and district where the Career Academy will be implemented (the same information as provided in the Letter of Intent)
- Name of Career Academy Director
- Primary phone number and email address for Career Academy Director
- List of any weekday dates between February 10 and March 31 that are not available for a NAF team visit to your school should we need to do so.

#### **Background information on the school and district (up to 3 pages). (20 points)**

- At the minimum, this should include:
- Demographic statistics and overview of the **community**
- Profile of the **district** (population, ethnic representation, academic performance, graduation rate, dropout rate)
- Profile of the **school** (population, ethnic representation, academic performance, graduation rate, dropout rate)

#### **1. Why Pursue an Academy? (10 points)**

- Response builds a compelling case for addressing student achievement through full-scale school redesign using the NAF model
- Response links this initiative to several of the following issues: rigor, relevance, relationships, contextual learning, college and career readiness

#### **2. Who is On the Planning Team? (15 points)**

- Team includes all core members, plus District Administration, School Administration, Instructors, Business Partners, Community Partners, Parents/Students/Alumni
- Names, roles, and expectations are provided and offer insight into the functionality of the group

#### **3. What is the Vision For the Academy? (30 points)**

- Response explicitly shows how the program's vision aligns closely with NAF's model and core principles and beliefs
- Response convincingly shows how this work will align with and assist with broader school initiatives

– Response provides a thoughtful, detailed plan that is likely to result in an equitable student population

**4. How Committed to and Ready For Planning Is the Team? (20 points)**

– Commitment and readiness are ensured by pieces that are already in place including all of the following:

- *Resources, funding, agreements in place*
- *Specific roles assigned*
- *Planning Time Available*
- *Experience learned from previous efforts*
- *Other evidence*

**5. Letters of Support (5 points)**

– Proposal contains 4 or more letters of support

– Letters indicate a strong willingness to support program and participate in planning activities

In addition to answering the specific requests outlined in the Year of Planning™ Proposal guidelines, teams should consider what assistance they will need. This section should outline your requests for technical assistance.

Schools should be honest in their assessment of need and specific in their requests for assistance. Although many teams bring a rich background of experience to the table, it is expected that technical assistance will be required to develop a successful Career Academy. Some areas to consider are staff development, internships, forming partnerships, and curriculum development and integration.

**Appendix I:**  
**NAF Year of Planning Agreement**



## YEAR OF PLANNING SERVICE AGREEMENT

The National Academy Foundation (NAF) facilitates partnerships between business leaders and educators that have been transforming students' lives for more than 25 years. NAF's small public school-based "learning communities" empower high school students to successfully go on to higher education and professions of their choosing. Because advanced planning and engagement of all members of the Academy team—from teachers, to administrators, to business partners—is essential to a successful Academy launch, new programs undergo a structured Year of Planning (YOP) process.

The YOP enables a school interested in starting a NAF Academy to begin the start-up process with assistance from NAF prior to enrolling students. Schools applying for this designation agree to take part in a self-assessment process aimed at developing a year-long plan for program development. Upon acceptance as a YOP site, the school will be entitled to NAF technical assistance, staff development activities, and use of Academy curriculum and other benefits associated with NAF network membership.

NAF understands that for most schools, planning is a luxury. Thus, it is our intention through the YOP process to make planning a requirement, giving schools and districts ample opportunity to create the appropriate environment for planning to take place. During YOP, schools and districts follow a process that will allow them to align and integrate resources and programs to serve both the Academy implementation and broader school improvement. The YOP process commences approximately 17 months before the Academy launch, and culminates with commencement activities at the Annual Institute for Staff Development.

This AGREEMENT sets forth the roles and responsibilities of the National Academy Foundation ("NAF") to **[Insert SCHOOL DISTRICT NAME]**, (the "SCHOOL DISTRICT") and the roles and responsibilities of the SCHOOL DISTRICT to NAF, in connection with the NAF Academies operating at **[INSERT SCHOOL NAMES]** (sometimes referred to herein as the "Academy program") to be established by the SCHOOL DISTRICT.

## Terms of the Agreement

In support of the effective development of a career-themed small learning community in the form of a NAF Academy, NAF and the SCHOOL DISTRICT agree to the following:

### I. To support this effort, examples of what NAF provides:

- A. NAF Academy Application Guide or AOE RFP
- B. NAF Academy Development Model
- C. NAF Year of Planning Guidebook
- D. YOP Self-Assessment procedure and tools
- E. Planning team assessments and performance coaching
- F. A series of online webinars hosted by content experts
- G. Two YOP Summer Work Sessions/Annual Institutes for Staff Development
- H. Two local Academy Development Visits throughout the year to the SCHOOL DISTRICT
- I. NAF Curriculum Online Access
- J. Access to NAF.org website through a secure, password-protected ID
- K. Access to the NAF online Data Center, as appropriate
- L. Access to the NAF Collaboration Network
- M. Tools to complete the development of an Academy YOP Portfolio, including:
  - i. Communication tool templates (Brochures, PowerPoint)
  - ii. Parent Involvement Options Template
  - iii. Curriculum Mapping Tools
  - iv. Partner Involvement Plan Template
  - v. Template for Partner Invitation and Options Letter

### II. SCHOOL & DISTRICT ROLES. Districts and schools play important roles in the development and implementation of academies. To support this effort it is expected that the SCHOOL and SCHOOL DISTRICT will:

- A. Pay a **one-time, non-refundable** YOP Services fee of \$6,000.00 to NAF
- B. Provide resources and support to send at least two YOP Planning Team members to required YOP Summer Work Sessions/Annual Institutes for Staff Development in July 2011 & 2012 based on selected prepayment options outlined in Section III.
- C. Complete the YOP Self-Assessment Profile
- D. Provide planning time and resources for teacher collaboration on developing an interdisciplinary, project based program of study, in accordance with NAF, district, and state standards.

- E. Provide time and space for minimum of bi-weekly Academy Planning Team meetings.
- F. Provide release time and space for minimum of two local Academy Development Visits with Academy Planning Team members, including school principal.
- G. Provide the YOP Planning Team time and access to resources necessary to develop schedules for the Academy student cohort.
- H. Establish and maintain a working relationship with partners from the business community, as well as post-secondary experts in related Academy theme areas.
- I. Establish, manage, and administer a supportive budget that meets the needs of the Academy Planning Team.
- J. Seek opportunities to secure outside funding and oversee development of grant letters and proposals.
- K. Complete the YOP Design Portfolio, which will include a representation of the work done throughout YOP as designated in the YOP Guidebook. This may include meeting notes, training agendas, student work, and Communications tools such as PowerPoint® slides and brochures.
- L. Identify and schedule cohorts of AOE students in each grade-level that will share a PLTW® or The STEM Academy® course, respectively and a minimum of three (3) academic courses.

**III. YOP Attendance at NAF Annual Institutes for Staff Development:**

- A. NAF will conduct a YOP Session at both the 2011 and 2012 Annual Institutes for Staff Development. YOP sites will be required to attend scheduled sessions as a condition of continued good standing in the Year of Planning cohort. For local budget flexibility NAF provides the prepayment options delineated in section III.B., for as few as zero (0) and as many as four (4) Planning Team members (“Prepaid YOP Institute attendee”) to attend the Annual Institute for Staff Development in 2011 and 2012, inclusive of Institute registration fees, air travel, and one-half lodging costs per person (no cost if rooms are shared with another NAF prepaid/sponsored Institute attendee).
- B. The SCHOOL DISTRICT will choose one method for covering the costs associated with required YOP Planning Team attendance at the 2011 and 2012 NAF Annual Institutes for Staff Development, from among three (3) options, each with varying degrees of NAF and SCHOOL DISTRICT financial responsibility.
  - Option 1-** The SCHOOL DISTRICT will pay NAF, in addition to the standard YOP Services Fee, the sum of thirteen thousand and eight hundred dollars (\$13,800) to cover the total cost of Four (4) designated Academy Planning Team members (“Prepaid YOP Institute attendee”) to attend the Annual Institute for Staff Development in 2011 and 2012, inclusive of Institute registration fees, air travel, and one-half lodging costs per person (no cost if rooms are shared with other NAF prepaid Institute attendee).

- **Option 2-** The SCHOOL DISTRICT will pay NAF, in addition to the standard YOP Services Fee, the sum of six thousand dollars (\$6,000) to cover the total cost of two (2) designated Academy Planning Team members (“Prepaid YOP Institute attendee”) to attend the Annual Institute for Staff Development in 2011 and 2012, inclusive of Institute registration fees, air travel, and one half lodging costs per person (no cost if rooms are shared with other NAF prepaid Institute attendee).
- **Option 3-** The SCHOOL DISTRICT will pay NAF, in addition to the standard YOP Services Fee, no additional fees to cover the total cost of designated Academy Planning Team members (“Prepaid YOP Institute attendee”) to attend the Annual Institute for Staff Development in 2011 and 2012, inclusive of Institute registration fees, air travel, and lodging. All costs associated with **sending required YOP Academy planning team members (minimum of two)** is provided by the district or other local funding. *Estimated cost is \$6,000.*

#### IV. Public Relations, Marketing and Materials Usage

##### A. Logos.

Use of the AOE logo, which can include the logos the AOE partners: NAF, PLTW, STEM101, NACME, ConnectEd, and SME Education Foundation. (The AOE logo can be accessed at <http://naf.org/press-kit>). Failure to comply with the provisions with this paragraph may lead to NAF’s exercising its right to terminate this Agreement.

##### B. Press Releases.

- 1) All local academy related press releases must include AOE’s official boilerplate which follows:

The National Academy Foundation (NAF) is an acclaimed network of career-themed academies that open doors for underserved high school students to viable careers. For nearly 30 years, NAF has refined a proven model that provides young people access to industry-specific curricula, work-based learning experiences, and relationships with business professionals. NAF academies focus on one of four career themes: finance, hospitality & tourism, information technology, and engineering. Employees of more than 2,500 companies volunteer in classrooms, act as mentors, engage NAF students in paid internships, and serve on local Advisory Boards. During the 2009-10 school year, 500 NAF academies served more than 53,000 students across 41 states, D.C. and the U.S Virgin Islands. NAF’s national graduation rate of 90% testifies to the effectiveness of this effort. The Academy of Engineering (AOE) is a partnership between NAF, PLTW, NAMCE, STEM 101, ConnectEd and SME Education Foundation.

- 2) AOE also requires that any Academy press release or news alert be sent to AOE. These materials should be sent to: [dnacharbar@naf.org](mailto:dnacharbar@naf.org)

- 3) All Academies are also encouraged to submit local success stories to NAF that they feel would be of national or regional interest. If appropriate, these will be included in AOE's public relations efforts.
- 4) These marketing guidelines (including logo usage and press release boilerplate) are subject to revision. If any changes are made to these guidelines, all directors in the network will be notified via e-mail.

**C. Use And Ownership Of Materials**

- 1) All materials provided by AOE to the SCHOOL DISTRICT including all brochures, administrative materials, and curriculum documents for the AOE Academy courses, in any form or format whatsoever, and all hardware and software relating to such materials or otherwise provided by AOE, are the sole and exclusive property of AOE, or are used by AOE under license. AOE is the exclusive owner of all proprietary rights (including copyrights) in the AOE Materials (except for such of those materials which are used under license). AOE Materials may only be used in accordance with the guidelines contained on the AOE web site. AOE Materials may not be reproduced or shared with or distributed or disclosed to other schools or educational institutions or, except with respect to NAF Academy program course instructors or other persons materially involved in the establishment and operation of the Academy, any other person or entity. The SCHOOL DISTRICT shall make this restriction clearly known to all persons or entities to whom or which AOE Materials are made available as permitted under this Section, and shall use its best efforts to ensure that all such persons or entities comply with the provisions hereof.
- 2) The SCHOOL DISTRICT agrees that all AOE Materials are to be used in strict accordance with the guidelines of the AOE provided to the SCHOOL DISTRICT by AOE. No modification may be made to any of the AOE Materials by the SCHOOL DISTRICT without the prior written consent of NAF, the request for which must be in writing and must include an assignment by the SCHOOL DISTRICT to AOE of any and all rights in and to the AOE Material(s) so modified, including, without limitation, any and all copyrights.
- 3) All NAF/Academy Materials adapted or reproduced for use by the SCHOOL DISTRICT shall bear the copyright notice set forth on such materials or such other notice, as NAF shall prescribe.

**TERM OF THIS AGREEMENT**

- A. Within sixty days of the signing of this agreement, either party may give the other written notice that it wishes to terminate for any reason, with full reimbursement of fees to the School District.
  
- B. This Agreement shall continue in existence until the occurrence of any of the following: either (1) the parties mutually agree that the school has successfully completed all YOP requirements and is eligible for consideration for full membership in the NAF Network, as defined under separate membership agreement; or (2) the parties mutually agree to terminate; or (3) either party gives the other written notice that it wishes to terminate, in which event the termination becomes effective on the last day of the semester in which the notice is given.
  
- C. Upon any termination of this agreement, the School District, and the NAF Academy program created hereunder, shall cease to be a member of Year of Planning Class within the National Academy Foundation Network, and all rights of the School District to participate in or receive assistance or materials from NAF to access restricted areas of the National Academy Foundation website and to use the name, logo, or other trademarks or service marks of NAF and the Academies, shall also cease. Upon termination, all NAF/Academy Materials (including all copies of such materials) in the School District's possession shall, upon NAF's request, be returned to the NAF national headquarters. NAF/Academy Materials which are not requested to be returned to NAF shall be destroyed by the School District, and the School District shall confirm to NAF that all such materials have been destroyed. Upon termination, any and all rights of the School District to use, disclose to or distribute the NAF/Academy Materials to others, for any purpose whatsoever, in any form or format whatsoever, shall cease.

**V. EXECUTION**

The Undersigned have executed this agreement on the dates indicated opposite their signatures.

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**Superintendent** *(signature)*                      *(Print)*                      *(District)*                      *(Date)*

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**High School Principal** *(signature)*                      *(Print)*                      *(School Name)*                      *(Date)*

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**\*\*Academy Director** *(signature)*                      *(Print)*                      *(District)*                      *(Date)*

---

**\*\*Advisory Board Champion** *(signature)*                      *(Print)*                      *(Advisory Board/Company)*  
*(Date)*

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**President**                      *(signature)*                      JD Hoye                      *(Print)*                      National Academy Foundation  
*(Organization)*                      *(Date)*

**\*\*For expansion to additional sites within the district and same Academy theme, (“expansion sites.”)**