



THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234

TO: P-12 Education Committee

FROM: Cosimo Tangorra, Jr. *Cosimo Tangorra Jr.*

SUBJECT: Charter Schools: Initial Application of a Conversion Charter School in Tuxedo Union Free School District

DATE: January 5, 2015

AUTHORIZATION(S): *Elizabeth P. Berlin*

SUMMARY

Issue for Decision

Should the Regents approve the proposed application for a charter school conversion for George F. Baker High School authorized by the Board of Education of the Tuxedo Union Free School District of the city of Tuxedo ("Tuxedo BOE")?

Reason(s) for Consideration

Required by State statute, Article 56, the NYS Charter Schools Act.

Proposed Handling

This item will come before the P-12 Education Committee and the Full Board for action at the January 2015 meeting.

Background Information

The Commissioner and Department advance a recommendation from the Tuxedo BOE to convert George F. Baker High School in Tuxedo, NY to a charter school, Tuxedo STEM Academy Charter School, so that the Board of Regents can consider, approve and issue an initial charter and provisional charter for the converted school.

A local board of education is the only charter entity that is allowed to act upon a conversion application (see §2851(3)(c) of the Education Law). Eligible applicants for a

charter school conversion must complete and submit an application to the local board of education. The charter entity will review the application in accordance with all of the provisions of Article 56. However, any application for a conversion must also include parental input. The parents or guardians of a majority of the students then enrolled in the existing public school must vote in favor of converting the school to a charter school. If that condition is not met, then the application to convert an existing public school to a charter school must be denied. Even if that condition is met, it is up to the board of education, as the charter entity, to make the final decision. A charter entity is not required to approve a charter; it may also require an applicant to modify or supplement an application as a condition for approval (see §2852(3) of the Education Law). Therefore, under Education Law §2852(3), school districts are permitted to convert schools to charter schools as a chartering entity after: 1) gaining approval of a majority of the parents of students currently enrolled in the school to be converted, 2) receiving approval from the district's Board of Education, and 3) receiving approval from the Board of Regents.

To date, nine district public schools in New York State have converted to charter schools (8 in NYC and 1 in Buffalo). Three of the NYC converted charter schools have since closed.

The attached materials demonstrate that the applicant group has gained necessary parent approval and BOE approval. The Tuxedo BOE, as the authorizer of this conversion charter school, now submits its recommendation to the Board of Regents for approval.

Name of Charter School	Tuxedo STEM Academy Charter School
Applicant Name (s)	Francesco Accetta Art Schouten Marco Margotta
District of Location	Tuxedo Union Free School District
Facilities	1 Tornado Drive, Tuxedo, NY 10987
Terms and Date of Charter	Initial Term: 5 Years through June 30, 2020
Proposed Grade(s) and Approved Enrollment	Grades 9-12 Year 1 (340); Year 2 (440); Year 3 (460); Year 4 (460); Year 5 (460)
Maximum Enrollment and grade span	460; Grades 9-12
Management Company	N/A
Other Partner(s)	N/A

Details about the proposed conversion charter school and how the Tuxedo Union Free School District staff reviewed the application is included in the attached *Summary, Findings and Recommendation* for the proposed school (Attachment A).

The application for this school is available electronically on the Tuxedo Union Free School District's website at the following address:
<http://www.tuxedoufsd.org/spotlight.cfm?sp=13804&school=0>

Recommendation

VOTED: That the Regents find that the proposed charter school: (1) meets the requirements set out in Article 56 of the Education Law, and all other applicable laws, rules and regulations; (2) will operate in an educationally and fiscally sound manner; (3) is likely to improve student learning and achievement and materially further the purposes set out in subdivision two of section twenty-eight hundred fifty of Article 56 of the Education Law; and (4) will have a significant educational benefit to the students expected to attend the charter school, and the Board of Regents therefore approves and issues a charter and provisional charter to the **Tuxedo STEM Academy Charter School** for a term of five years in accordance with §2851(2)(p) of the Education Law.

Timetable for Implementation

The Regents action is effective immediately.

Attachments

TUXEDO UNION FREE SCHOOL DISTRICT

CONVERSION CHARTER SCHOOL APPLICATION SUMMARY, FINDINGS, AND RECOMMENDATIONS

TO ESTABLISH THE PROPOSED:

TUXEDO STEM ACADEMY AT GEORGE F. BAKER HIGH SCHOOL CONVERSION CHARTER SCHOOL

December 2014

TABLE 1: SUMMARY OF THE PROPOSED TUXEDO STEM ACADEMY AT GEORGE F. BAKER HIGH SCHOOL CONVERSION CHARTER SCHOOL

Charter School Name (1)	Tuxedo STEM Academy at George F. Baker High School Conversion Charter School
Applicant Names	Francesco Accetta Art Schouten Marco Margotta
Applicants Email Address	Francesco.Accetta@tsaccs.org Art.Schouten@tsaccs.org Marco.Margotta@tsaccs.org
Public Contact Name	Francesco Accetta
Public Contact Address	1 Tornado Drive, Tuxedo NY 10987
Public Contact Email Address	Francesco.Accetta@tsaccs.org
Web Site	http://www.TuxedoSTEMAcademy.org
District of Location	Tuxedo Union Free School District
Opening Date	September 2015
Proposed Charter Term (2)	Five (5) years through June 2020
Proposed Management Company or Partners	None
Proposed Replication of Successful School or Model	Original Design
Projected Enrollment and Grade Span During Charter Term	Total projected enrollment for grades 9-12: Year 1 (340); Year 2 (440); Year 3 (460); Year 4 (460); Year 5 (460)
Projected Maximum Enrollment and Grade Span	Projected maximum enrollment of 460 students in grades 9-12.

(1) N.Y. Education Law § 2851(2)(k) (2) N.Y. Education Law § 2851(2)(p). The Charter Term includes 1 year for Planning and Transition.

The Tuxedo STEM Academy at George F. Baker High School Conversion Charter School (The Tuxedo STEM Academy) is a conversion charter school that expands upon the successful elements of the highly regarded George F. Baker High School (TUFSD)—which has been recognized locally and nationally for its strong academic programs, safe, small and individualized learning environment—and introduces a new focus on STEM education, progressive instructional approaches, and partnerships with nearby STEM related industries and higher education institutions in order to provide students of the region with access to professionals, collaborative projects, and internship opportunities.

KEY DESIGN ELEMENTS

- **STEM PATHWAYS:** The Tuxedo STEM Academy is designed to provide students with progressively specialized instruction and hands-on experiences in one of four Pathways: *Applied Sciences (Traditional Engineering)*, *Computer Science*, *Health Science*, or *Environmental Science*, with the ideology and philosophy developed in the STEM fields infused in all aspects of curriculum. This will be accomplished through hands-on, problem-based, collaborative learning ingrained with digital and technological literacy. The program is designed to provide relevant learning opportunities that allow students to become active participants in the learning process.

As a freshmen, students are introduced to the skills and concepts of STEM education. Sophomore students then apply these STEM concepts and skills to gain an understanding in the STEM pathway that meets their interest. Juniors then select a Pathway in which to concentrate, take introductory coursework and electives in the chosen area and collaborate with STEM Partners on real-world projects. As seniors, students continue their focused coursework while working in a STEM Pathway internship under a faculty advisor.

Students will also have the opportunity to submit a Creative Design Plan that will allow them to develop a hybrid learning plan incorporating facets of the STEM pathways to build a program that best suits their educational goals.

- **STANDARDS OF PRACTICE:** The Tuxedo STEM Academy has developed six standards by which the STEM Academy will operate. These standards have been incorporated throughout the entire high school program and work in conjunction with the Engineering by Design Standards-Based Model, 21st Century Skills and the Common Core State Standards set forth by New York State Education Department and the Board of Regents. The STEM Academy Standards of Practice will be used as a measuring tool, ensuring the role and impact of the program. The STEM Academy Standards of Practice include the following:
 1. Identification of Technologies and Resources
 2. Interpret and Communicate Information and Ideas
 3. Investigate Problems and Engage in Research
 4. Strategic Planning, Problem Solving and Systematic Approaches
 5. Collaborate as a Team
 6. Apply Technology Appropriately
- **PARTNERSHIPS WITH HIGHER EDUCATION AND STEM INDUSTRY LEADERS:** By partnering with STEM industry leaders and higher education institutions, the students will be provided the opportunities to work with STEM professionals. These partnerships will serve to ensure authenticity to the program and aligned industry needs and standards to the STEM

curriculum resulting in a divergent and adaptable program and student body. These partnerships will facilitate in the instruction of students by industry and higher education specialists, as allowed in in charter law. Additionally, these partnerships will afford the student body many opportunities such as field trips, collaborative-based projects, access to college professors and credit, and working relationships with professionals and experts in the STEM fields.

- **PROJECT BASED LEARNING:** STEM education is an approach to teaching and learning that integrates the content and skills of Science, Technology, Engineering, and Mathematics with the arts and humanities. Through rigorous engagement in inquiry, applied practice, collaboration, and investigation students will engage in project-based challenges and diverse assessments that focus on real-world applications.

In following with the ideology of problem-based learning, the Tuxedo STEM Academy will incorporate the use of rubrics for students' assessment and data-based decision making. The rubrics will be designed to measure the specific criteria the project/problem at hand while meeting the overall criteria of the program. Through the implementation of problem-based learning, the rubrics will focus on the process in which the students complete their project as well as the final project, paper, demonstration, or presentation. The program seeks to focus on **how** the student got from point A to point B rather than just focusing on the end result. By looking at the whole process, the program will be able to accurately gauge a student's areas of strength and areas of weakness from start to finish rather than focusing on a single element on a single day.

Although students will be learning STEM related technical skills in their pathway of concentration, throughout this program, the students will be mastering skills that transcend STEM. The learning and mastery of these skills are equally as important as the technical skills learned. These skills include: leadership, creative thinking, problem solving, teamwork, communication, planning, and collaboration.

- **TECHNOLOGY IN LEARNING:** The Tuxedo STEM Academy has developed an academic plan that incorporates the ideology set forth by the Partnership for 21st Century Skills (<http://www.p21.org>), The International Society for Technology in Education (<http://www.iste.org>), The New York State Association for Computers and Technology in Education (<http://www.nyscate.org>) in which collaboration, creativity, critical thinking, project based learning, and technology integration are cornerstones in learning.

“Properly used, technology will help students acquire the skills they need to survive in a complex, highly technological knowledge-based economy”

(<http://www.edutopia.org/technology-integration-introduction>) Therefore, the Tuxedo STEM Academy has developed a program that will best suit the needs of the students, infusing the tools and skills necessary to survive in a digital society. The objectives include the incorporation of:

1. Digital Literacy
2. Technological Literacy
3. Collaboration
4. Project-based Learning
5. Creativity
6. Hand-on Applications
7. Demonstration of knowledge and skills

EDUCATION PLAN

OVERVIEW:

The mission of the Tuxedo STEM Academy is to prepare students to meet the challenges of a rapidly changing global information and technology based society by providing them with a STEM education that emphasizes authentic learning opportunities. In an integrated learning environment that is small and personalized and based in rigorous inquiry, applied practice, collaboration, and investigation, students will engage in project-based challenges and diverse assessments that focus on theoretical and real-world applications. Through partnerships with STEM industry leaders and higher education institutions, the Tuxedo STEM Academy curriculum will reflect current and evolving industry demands with the goal of providing students with opportunities to work with STEM professionals on real-world challenges. The Tuxedo STEM Academy will provide students with a nurturing school environment that prepares them to meet the competitive challenges of tomorrow with the traditional and emerging skills of today.

The Tuxedo STEM Academy will be established to provide students with an innovative and challenging academic program focused on Science, Technology, Engineering, and Mathematics. Standards of Practice that reinforce inquiry, logical reasoning, problem solving, collaboration, creative thinking, leadership and the use of technologies are the foundations of the Academy. Areas of concentrated study in the Tuxedo STEM Academy include Applied Sciences (Engineering), Computer Science, Environmental Science, and Health Science. The Academy also places a strong emphasis on authentic learning, providing students with opportunities to collaborate with professionals and gain workplace experience through internships, independent projects and collaborations.

PROFESSIONAL DEVELOPMENT & TEAM TEACHING APPROACH:

The framework of the STEM Pathways allows for the development of a team teaching approach where each grade level has its own core of English, Math, Science, Social Studies teachers in addition to pre-selected elective and STEM Core classes. Therefore, professional development/team meeting time will be incorporated into the academic calendar during weekly faculty meetings and conference days to allow the teams to work collaboratively on larger projects and to discuss the team's approach to individual student needs and educational goals for each cohort.

Conference days will be embedded within the academic calendar to provide on-going professional development for faculty and staff throughout the school year. Additionally, faculty meetings will be used for collaboration, team sharing, and professional development on a weekly basis providing ample time for staff to work together and share resources/ideas on a regular basis.

Further professional development will also be built within the academic school day through collaboration and direct instruction/coaching in the classroom therefore providing assistance to the teacher as well as the class simultaneously. This will allow teachers to aid one another in the development and execution of new ideas while incorporating the students in the learning/design process. This coaching model may include the involvement of collaborating teachers, professional development specialists, or integration specialists who are familiar with and able to operate in a coaching capacity within the classroom to encourage, assist, and share knowledge and resources.

With the proximity to the New York Metro area and institutions of higher learning throughout the Hudson Valley including a number of SUNY and private institutions, The Tuxedo STEM Academy will encourage and promote professional development opportunities throughout the calendar year including summer learning institutions, conferences, and related programs. Additionally, the program will also seek to incorporate online programming through online courses and/or

webinars to provide as many opportunities as possible while making the necessary adjustments in teachers' schedules to allow for such programming.

CURRICULUM AND INSTRUCTION:

The student education goals include:

- Students will actively engage in project-based, collaborative learning environments that incorporate and promote the use of digital technologies and 21st century learning skills set for by the International Society for Technology in Education (ISTE), Partnership for 21st Century Learning, and the International Technology and Engineering Educators Association (ITEEA).
- Student coursework will incorporate the Standards of Practice set forth by the Tuxedo STEM Academy as well as the learning standards established by the New York State Department of Education, with a stronger focus on hands-on, problem-based, collaborative learning ingrained with digital literacy and informational technologies.
- Students will meet the requirements for either a Regents or Advanced Regents diploma per the graduation standards set forth by the New York State Department of Education through Part 100.5.
- Students may choose one of the STEM Pathways—Applied Sciences (Engineering), Computer Science, Health Science, or Environmental Science—as their primary program of study during their sophomore year and complete all required courses for graduation.
- Students who do not choose one of the four outlined STEM Pathways may submit a Creative Design Plan that incorporates the requirements set forth by the STEM Pathways using courses from a combination of two or more Pathways and fulfills all graduation requirements set forth by the New York State Department of Education.
- Students will be active learners and decision makers in their educational development by developing student portfolios that include sample work, rubrics, and self-evaluations.
- Students will take part in collaborative group projects, internships, and/or job-shadowing opportunities at least once during the four-year program.

Tuxedo STEM Academy program includes six standards by which the Tuxedo STEM Academy will operate. The Standards of Practice have been developed from the framework included in the Maryland's STEM Initiative created by the Maryland State Board of Education (<http://www.marylandpublicschools.org/MSDE/programs/stem>). These standards have been incorporated throughout the entire high school program and work in conjunction with the Engineering by Design Standards-Based Model, 21st Century Skills and the Common Core State Standards set forth

by New York State Education Department and the Board of Regents. The STEM Academy Standards of Practice include the following:

1. Identification of Technologies and Resources

Proficient students will be able to identify the appropriate technologies and/or resources necessary to review, develop, and assess potential solutions as they relate to various challenges, problems, or projects.

2. Interpret and Communicate Information and Ideas

Proficient students will be able to interpret, communicate, and present information/ideas when answering complex questions, investigating issues, and/or developing solutions for various challenges.

3. Investigate Problems and Engage in Research

Proficient students will be able to plan and conduct research to address various questions, problems, and projects.

4. Strategic Planning, Problem Solving, and Systematic Approaches

Proficient students will be able to develop a plan of action or strategy for resolving, answering, solving various issues, problems, and/or projects.

5. Collaborate as a Team

Proficient students will collaborate as a team to answer complex questions, to investigate global issues, and to develop solutions for challenges and real world problems.

6. Apply Technologies Appropriately

Proficient students will apply technology appropriately to answer complex questions, to investigate global issues, and to develop solutions for challenges and real world problems.

The Tuxedo STEM Academy will adhere to Common Core Learning Standards (CCLS) through New York State as adopted by the New York State Board of Regents while also incorporating New York State's Math, Science, and Technology (MST) Standards, the ISTE's NET Standards and the standards set forth by the Partnership for 21st Century Skills. The program has also chosen to adopt the curriculum and Standards for Technological Literacy (STL) set forth by The International Technology and Engineering Educators Association (ITEEA) through Engineering by Design. By infusing the aforementioned standards and curriculum within the program, the Tuxedo STEM Academy will be able to provide a relevant curriculum that meets the requirements set forth by CCLS and The New York Board of Regents while also providing numerous opportunities and resources geared towards student success in the information age. The combination of these standards and curriculum will further the students' classroom knowledge, driving them to develop the skills and abilities laid out within the program including but not limited to:

- Global, Financial, and Economic Awareness
- Civic, Health, and Environmental Literacy
- Information and Communication Technology Literacy
- Social and Cross-Cultural Awareness
- Initiative, Adaptability, Self-Direction, and Accountability
- Leadership and Responsibility

The Tuxedo STEM Academy seeks to develop education pathways in the fields of Applied Science, Computer Science, Environmental Science, and Health Science. Each pathway will include the necessary core courses as well as electives required to graduate. These pathways will take into consideration those students seeking Regents diplomas as well as Advanced Regents diplomas and will offer the required courses accordingly.

The Tuxedo STEM Academy has worked with higher education and professionals in the STEM fields to chart these four distinct pathways that outline all courses that a student is required to take from ninth through twelfth grade within one of the four fields of their choice. The pathways will ensure that students take all prescribed courses as well as select electives in their field of study while also providing opportunities for job shadowing and internships.

Students will select one of the four pathways following their freshman or sophomore year. Each pathway has been designed similarly to a college program in which students in particular "majors" have select core and elective courses they must take in order to graduate. The Tuxedo STEM Academy has incorporated a Creative Design Plan for any student who has a vested academic interest in two or more pathways and seeks to develop a hybrid program. The Creative Design Plan allows students to

combine various core course requirements as well as electives from multiple pathways to develop a unique pathway that will meet the student's individual needs and/or college and career interests.

STUDENT ACHIEVEMENT AND ASSESSMENT:

In following with the ideology of problem-based learning, the Tuxedo STEM Academy will incorporate the use of rubrics for students' assessment and data-based decision making. The rubrics will be designed to measure the specific criteria for the project/problem at hand while meeting the overall criteria of the program. Through the implementation of problem-based learning, the rubrics will focus on the process in which the students complete their project as well as the final project, paper, demonstration, or presentation.

The program seeks to focus on *how* the student got from point A to point B rather than just focusing on the end result. By looking at the whole process, the program will be able to accurately gauge a student's areas of strength and areas of weakness from start to finish rather than focusing on a single element on a single day.

Students will also be asked to take an active role in their own learning. Through rubrics and other self-reflective activities, the program will require all students to develop self-evaluation skills, regularly assessing their own work, content mastery, learning process, skill development, and accomplishments.

Several culminating milestones will be required of all students. These include research papers, reports, multimedia shows, artifacts, presentations, debates, poems, essays, narratives, and public exhibitions. Each culminating product will reflect a rigorous process including, but not limited to proposals, outlines, blueprints, drafts, critiques, models, journal entries, records, interviews, progress reports, and documentation. These items will make up the individual students' portfolios.

Ultimately, graduates will have their portfolios to present to postsecondary institutions and potential employers as substantive, compelling evidence of marketable, real-world core competencies. Additionally, the Tuxedo STEM Academy has developed the STEM Pathways that incorporate the NYSED Regents requirements and programs in Applied Science, Computer Science, Health Science, and Environmental Science. Each pathway outlines the required courses for both a Regents diploma as well as a localized STEM endorsement for those that complete the Pathways.

Therefore, the Tuxedo STEM Academy will use the assessment data obtained by the New York State Regents exams as well as the information collected through the organizational goals to make informed key decisions including, but not limited to:

1. Refocusing or realigning Support Services to match the needs of the students
2. Reviewing curriculum maps ensuring that student course selections are aligned to the time tables set forth in the STEM Pathways
3. Working with industry experts and/or higher education professionals to ensure that academic coursework matches the workplace skills
4. Ensuring that individual students and/or particular cohorts academic goals are aligned to the Academy's organizational goals and taking corrective actions to address areas of weakness that need to be rectified

ADDITIONAL INSTRUCTIONAL AND SUPPORT SERVICES:

The goal and vision of the Tuxedo STEM Academy are to provide opportunities for students of all academic abilities to thrive and develop. Although the program has four distinct pathways, students have numerous opportunities to customize and adapt the program to fit their needs and abilities.

Through project-based learning, digital literacy, and the STEM Pathways students will have increased autonomy to explore various avenues in education and therefore challenge themselves beyond what might have otherwise been possible in a traditional learning environment. Students who

may be considered advanced and/or gifted will be able to develop unique learning opportunities and therefore further challenge their skills and abilities through independent study.

General Education support services will be provided by the Tuxedo STEM Academy should a student(s) struggle. These include IST (Instructional Support Teams), AIS (Academic Intervention Services) and ESL/ELL Services. The IST Team will consist of an Administrator, Guidance Counselor, Special Education Teacher, and General Education Teacher, and other professionals as needed. The IST will recommend intervention services and strategies, and academic or behavioral supports to be incorporated/implemented into the student's academic plan. AIS will be provided to students who are at risk of not gaining the skills and knowledge necessary to meet or exceed designated performance levels of NYS Assessments and/or competency levels designated by the Tuxedo STEM Academy. To help ELL students achieve the same high school-wide standards, the Tuxedo STEM

Academy will use a modified English-immersion program with supplemental support when needed. While all ELL students will participate in regular classes, some may require extra support, which will be provided by an ELL instructor at regular intervals.

The Tuxedo STEM Academy will include a Special Education team to oversee special education services for students with disabilities. The Special Education team will initially consist of 1 Full-Time School Psychologist, 1 Full-Time Guidance Counselor, and 4 Full-Time Certified Special Education Teachers who will work with both staff and students in the collaborative environments while also providing additional skill instruction. The Special Education Teachers will be assigned a case load and will work closely with the School Psychologist, General Education Teachers and Guidance Counselor. The Tuxedo STEM Academy Special Education Team will also work closely with the District of Residence Committee on Special Education Chairperson (CSE) and the 504 Plan Coordinator or designee to support the students, facilitate communication with the student home districts, and ensure that all IEPs and 504's are current.

COMMUNITY OUTREACH

Tuxedo is in the midst of a multi-year highly publicized process to convert George F. Baker High School to a STEM Academy. The movement towards a conversion charter and academy model arose through many detailed conversations and public forums with the community. The process began in September 2012 with the examination of possible educational models for George F. Baker High School by the Public Consulting Group (PCG). Following their review and recommendation, the district has been gathering research and resources as well as meeting with the community to define a plan of action and prepare the necessary pieces to submit its conversion charter application. The information below highlights these distinct phases and the public outreach associated with them.

Shaping the Future of George F. Baker High School

During the months from September 2012 through January 2013, the Tuxedo Union Free School District worked closely with the Tuxedo and Greenwood Lake communities to determine the future of the George F. Baker High School. Public Consulting Group (PCG) provided support, educational expertise, and guidance through a process that yielded recommendations for the community's consideration. PCG consultants began this process by gathering input and feedback from the communities. Anonymous surveys, focus groups, and interviews were conducted to gain insight into what is important to members of the Tuxedo and Greenwood Lake (GWL) communities regarding the future of the existing high school. This insight helped to identify the most viable options for the high school's future. This process concluded in January 2013 with final recommendations made by PCG.

The project details that culminated with the recommendations of PCG are outlined below:

Phase One: This phase was a data gathering stage where community members participated in online surveys, and Focus Groups conducted by PCG. The focus of this work was to determine expectations for the future of the school, as well as, the desired outcomes for students.

Phase Two: This phase included the analysis of data gathered in phase one, along with a public presentation of major themes gathered during Phase One. This phase also included the "Design Thinking Process" where a Working Committee began to brainstorm ideas related to the major themes. It is during this phase that ideas of STEM, STEAM, and charter school arose.

Phase Three: This phase included the evaluation of ideas/options generated by the Working Committee. PCG provided a set of recommendations based on the analysis of those ideas. This phase of work concluded with a public presentation of recommendations for moving forward.

Establishing a STEM Emphasis

Under their discretion and following the recommendation of PCG, Tuxedo Union Free School District (TUFSD) allocated resources to begin the development of a STEM program. A team of educators was identified and began the development of instruction and adoption of materials that would best serve the STEM program. Additionally, this team prepared its initial year of instruction and has continued to refine and evolve the STEM program.

An application team comprised of George F. Baker High School administrators, teachers, staff, and community members began the process of researching and developing an application for establishing the school as a conversion charter. The STEM team and application team worked closely together in the development of the application and have kept the district administration and board informed of their intent. These teams together developed all aspects of the charter application, created the educational plan, and also spearheaded all efforts to engage the community more fully in the process.

PHASE	DATE	OUTREACH EVENT
Discovery Phase	September 2012 - January 2013	TUFSD engages with PCG to explore potential pathways for the future of George F. Baker High School
	October 22-25, 2012	19 Tuxedo Community Focus Group facilitated by PCG
	November 13, 2012	3 Greenwood Lake Community Focus Groups
	November 14, 2012	PCG Public Presentation of Findings, <i>"Shaping the Future of our High School"</i>
	January 10, 2013	Community Presentation of PCG Final Report
	February 6, 2013	2 Sessions of PCG Q&A on the Final Report
Recommendation Phase	May 16, 2013	George F. Baker Open House (STEM)
	June 5, 2013	Charter Presentation at Tuxedo UFSD <i>Opportunity to Vote after Presentation</i>
	June 6, 2013	Charter Presentation at Greenwood Lake <i>Opportunity to Vote after Presentation</i>
	June – August 2013	<i>Parents Voted and Approved Initiative</i>

PHASE	DATE	OUTREACH EVENT
Application Phase	Sept 2014 – May 2014	Application research and development
	March 31, 2014	Applicant Team Presentation to Community

The Application Team developed a Facebook page (<http://bit.ly/TuxedoSTEMAcademy>) as well as the Tuxedo STEM Academy website (<http://www.TuxedoSTEMAcademy.org>) to provide interested parents and other parties with additional information pertaining to the proposed conversion charter school. Both resources provide interested parents and parties with ongoing updates while also seeking to answer various questions regarding the STEM program and the conversion charter application. Individuals can submit questions and comments regarding the program on either page with answers provided by the application team.

SCHOOL GOVERNANCE AND LEADERSHIP

Including the lead applicants, Mr. Frank Accetta, Mr. Marco Margotta and Mr. Art Schouten, the planning team consisted of 13 individuals. Eight individuals are named in the application as proposed voting Board of Trustee members. A 9th voting member of the Board of Trustees is indicated in the application to be a representative of NYSUT or an Educational Professional. A final non-voting member of the Board of Trustees is indicated in the application as a member of the Tuxedo STEM Academy Teacher’s Association. The Trustee Background Information Form, Statement of Assurance and resume or curriculum vitae are included in the application for the 8 individuals who will compose the School’s initial voting Board of Trustees. As required, the applicant group has provided a set of draft by-laws and a draft code of ethics.

The Tuxedo STEM Academy will be led by 3 administrative position including the Executive Director, Director of Student Support Services and the Director of Instructional Services. The business function will be provided by a Financial Management Company that specializes in Charter schools.

The eight proposed initial members of the Board of Trustees are described below:

- **DENIS DWYER:** Currently Vice President of Marketing and Business Development for Related Companies and the Tuxedo Farms project; prior experience in corporate sponsorship and branding, sales and marketing, publishing.
- **JOHN MOON, ESQ.:** Currently a partner at Miller & Wrubel PC where he defends financial institutions, public companies and individuals; prior experience as Enforcement Branch Chief of Securities and Exchange Commission; prior experience as Executive Director of litigation of UBS Investment Bank; prior experience as Board of Education member of the Tuxedo Union Free School District; parent of two students in the Tuxedo Union Free School District., community member.
- **JOHN MOREY:** Currently an Adjunct Professor at SUNY Orange for Engineering and Computer Programming; prior experience as Creator of and Instructor in the Orange-Ulster BOCES for New Vision Engineering Program; Certified NYS Technology Education Teacher; holds BS in Mechanical Engineering

- FRANK PEVERLY:** Currently Vice President of Operations at Orange and Rockland Utilities, Inc.; prior experience as an engineer with Central Hudson Gas & Electric Co.; member of the Institute of Electronic and Electrical Engineer (IEEE), the Association of Energy Engineers (AEE), and the Project Management Institute (PMI); serves on the Executive Committee of the Edison Electric Institute's (EEI) Transmission, Distribution & Metering Committee; serves as Chair of EEI's Distribution Regulation Working Group; serves a Vice Chair of EEI's Workforce Management Working Group; member of the Board of Directors of the Northeast Gas Association; Executive Committee member for NYSEARCH – an independent gas research and development organization; member of the Board of Directors of NYSEARCH Robotics LLC.;

As a community member in Tuxedo, Chairman of the Town of Tuxedo Zoning Board of Appeals, member of the Board of Trustees of SUNY Orange Foundation, and a member of the Board of Trustees of the Tuxedo Park School; President of the Woodlands at Tuxedo Homeowner's association and President of the Woodlands Sewage Works Corporation; community member.
- BOB RICHARDS:** Currently Con Edison Operation Trainer; prior experience as Con Edison Senior Specialist, Energy Nuclear ALARA Specialist at Indian Point Energy Center, Con Edison ALARA Specialist; ; current Resident of Greenwood Lake and parent
- BILL SWEET:** Currently Financial Planner and Investment Manager of Stevens & Sweet Financial; certified Financial Planner Practitioner; BS in Computer & Systems Engineering from Rensselaer Polytechnic Institute; President of the Tuxedo Chamber of Commerce; Treasurer of the Tuxedo Park Library; served as Captain in United States Army.
- DEBRA THOMAS:** Currently the Chief Executive Officer of the Rockland Teachers Center Institute, Executive Director of NYS Teacher Resource & Computer Center; experience as Dean of Academic and Global Partnerships Programs at the New York International University Center, earned a Ph.D. in Educational Leadership, Administration and Policy, Masters of Science in Educational Counseling, NYS SAS/SDA Certification, NYS Certification in Secondary Social Studies; Adjunct Professor of Education at Manhattanville College, Long Island University – CW Post College; Current memberships include Partnership Rockland County Workforce Investment Board, Vice-President/Member of New York State Association of Teacher Educators, Teacher Education Advisory Board – Rockland Community College, NYSUT Committee of Teacher Centers, NYS Higher Education Committee, Delegate, AFT and NYSUT Representative Assembly, North Rockland Teachers Association Executive Board.
- DOROTHY ZIEGELBAUER:** Currently Strategic Innovation and Marketing Manager at Verisk Analytic/Insurance Service Office ; prior experience in product development, database architecture, project management of systems development life cycle, patent development; parent of students in Tuxedo UFSD , community member.

FACILITY

The Tuxedo STEM Academy will function in the current George F. Baker High School building of the Tuxedo Union Free School District. The current configuration of the George F. Baker building is comprised of both high school and district space and currently houses the 9-12 high school program within the Tuxedo Union Free School District.

The Tuxedo STEM Academy would continue to use the existing classrooms at the George F. Baker building, located at 1 Tornado Drive in Tuxedo, New York. The Tuxedo STEM Academy would primarily utilize the Science and Technology classrooms, computer labs, and other Tuxedo STEM related classrooms. All other classrooms will be used to support various electives and core

education classes. The students of the STEM Academy will have access to some community amenities like athletic fields and community centers.

The facilities used by the Tuxedo STEM Academy will be leased from the Tuxedo Union Free School District.

PROJECTED FISCAL AND PROGRAMMATIC IMPACT ON THE DISTRICT OF LOCATION AND SURROUNDING DISTRICTS

The Tuxedo STEM Academy will have minimal fiscal impact on most of the surrounding school districts to be served, with two notable exceptions—Tuxedo Union Free School District (the District of Location) and Greenwood Lake Union Free School District. When calculating the likely impact on overall budgets, using projected enrollments and New York State Education Department tuition allowances, the anticipated cost of sending students to the Tuxedo STEM Academy will be less than 2/10ths of 1% of each of the five districts listed in the table below, save Tuxedo UFSD and Greenwood Lake UFSD. It must also be noted that the figures below do not take into account the State Aid each district will receive per student; thereby reducing the overall costs. The Sending Districts included in the chart below are all within a 15 mile radius of the Tuxedo STEM Academy: Tuxedo UFSD (Tuxedo); Greenwood Lake (GWL); Monroe-Woodbury (MW); North Rockland (NR); East Ramapo (E. Ramapo); Ramapo; and Warwick. The following chart only reflects the projected fiscal impact for the 2015/16 school year.

District	Projected Students	NYSED Tuition ¹	Cost of Enrolling Projected Students	2014/2015 Projected Budget ²	Projected fiscal impact as a percentage of overall budget
Tuxedo	82	\$17,470	\$1,432,540	* \$10,988,063	13.037 %
Greenwood Lake	138	\$18,311	\$2,526,918	\$23,859,490	10.591 %
Monroe Woodbury	25	\$13,089	\$327,225	\$153,536,304	0.213 %
North Rockland	30	\$17,121	\$513,630	\$206,330,813	0.249 %
East. Ramapo	33	\$16,555	\$546,315	\$209,969,250	0.260 %
Ramapo	16	\$16,919	\$270,704	\$128,009,853	0.211 %
Warwick	16	\$12,198	\$195,168	\$89,129,643	0.219 %

* The figure for Tuxedo represents the 2013/14 Tax Levy. This figure was used as a best estimate since Tuxedo will not be incurring the expenses of operating a 9 – 12 program once the Tuxedo STEM Academy is operational.

¹NYSED State Aid 2013-2014 Charter School Tuition website (stateaid.nysed.gov/charter/html_docs/charter_1314_rates.htm ² NYSED 2013-2014 Property Tax Report Card Data

The two exceptions to the minimal fiscal impact need to be addressed independent of one another. While 13% of the TUFSD budget will be spent on sending approximately 82 students to the Tuxedo STEM Academy, this represents a decrease in costs associated with operating a high school. Specifically, TUFSD currently operates a high school with diminishing enrollment. As a result, the cost per student has risen in recent years.

As Greenwood Lake does not currently operate its own high school and pays tuition to surrounding districts. Although the charter tuition is higher than the current tuition rates being paid to Tuxedo for high school students, it is anticipated that Greenwood Lake will receive Transition Aid over years 2, 3 and 4 of the Conversion Charter School's existence at 80%, 60% and 40%. In addition, it is anticipated that incremental Foundation Aid may be received for each GWL student attending the Conversion Charter. That is, although the tuition expense will increase, it is expected that the revenue will increase as well.

PUBLIC HEARING AND PUBLIC COMMENT

As required by Charter School Act, the Tuxedo Union Free School District held a Public Hearing on June 24, 2014 at 7:00 PM in the Tuxedo Union Free School District. This meeting was attended by 50+ individuals. In addition, 3 of 3 Lead Applicants, 12 Tuxedo STEM Academy Founding Group members, 35 members of the Tuxedo Teachers Association, and 5 of 7 Tuxedo Board of Education members were in attendance. Fifteen individuals spoke. Fourteen of these spoke in favor of the proposed Conversion Charter School. One individual, the Greenwood Lake Interim Superintendent, as representative of the Greenwood Lake UFSD, spoke in opposition to the proposed conversion charter.

Legal notices in two newspapers, 6 posting in town locations, Tuxedo UFSD and School website postings, notification of the Greenwood Lake School District and notification of the Orange Ulster BOCES District Superintendent served as a means of communicating this Public Hearing purpose, date and time. All notices included the district website as a source for viewing the application and noted the email account created specifically for the gathering of public comment and questions. Six emails have been received at this email address and all are in favor of the proposed Conversion Charter School. In addition, one letter was delivered to the district in favor of the Conversion Charter School.

APPLICATION REVIEW PROCESS

Upon receipt of a Tuxedo STEM Academy at George F. Baker High School Conversion Charter Application from the Lead Applicants, the Tuxedo UFSD informed NYSED of the receipt of this application, the interest of the district in this application, and their intent to begin a Peer Review Process. The process for this Peer Review was shared with the NYS Education Department, Office of School Innovation - Charter Schools Office. The Call for Application Reviewers was posted on the Tuxedo District and School websites along with the timeline of commitment. In addition, the forms necessary to be completed were modeled after the forms used by NYSED and were posted on the websites along with the timeline. The necessary documents required to apply to be a Volunteer Peer Reviewer included:

- Peer Reviewer Conflict of Interest Disclosure Form
- Peer Reviewer Questionnaire
- Confidentiality Agreement
- A current resume of applicant

Eight individuals applied to participate in the Volunteer Peer Review Panel. They included:

1. Head of School, Tuxedo Park School
2. Horticultural Therapist, Parent, Community Member of Tuxedo UFSD
3. Community Member, Business, Technology, Marketing, Finance
4. Rockland County School Teacher, Community Member, Parent
5. Executive Director of Charter School in NYC
6. Building Level Principal in Tuxedo UFSD, other than High School
7. Tuxedo Board of Education President, Building Principal in New Jersey School District, Community Member, Parent
8. Superintendent of Schools, Tuxedo Union Free School District

The Volunteer Peer Review Panel met on four (4) occasions. The review process utilized the Evaluation Criteria contained in the NYS Application Toolkit. The first three meetings were dedicated to specific sections of the application. The July 15th meeting focused on Section I (Mission, Key Design Elements, Enrollment and Community) of the Application. The July 17th meeting focused on Section II (Education Plan) and part of Section III (Organizational and Fiscal Plan Subsection A-Applicant(s)/Founding Group Capacity through Subsection E – Professional Development). The July 22nd meeting focused on the remaining portions of Section III (Organizational and Fiscal Plan Section F-Facilities through Section M-Dissolution Plan) and the application Waivers.

After each meeting, a summary of comments and concerns were provided to the Volunteer Peer Review Panel. In addition, after each meeting, feedback was provided to the Lead Applicants in the form of concerns, comments or questions.

The Lead Applicants provided an updated application for a second review. Since the Volunteer Peer Review Panel was familiar with the application and the comments from the first review, this second review of the entire application took place on the 4th meeting, August 12th. As a result of this second review, the Peer Review Panel agreed that the application met all evaluation criteria, demonstrated sound educational design and direction, and fiscal responsibility. It is with confidence that this application was forwarded to the Tuxedo Board of Education for review and approval.

At the August 21st regular meeting of the Tuxedo UFSD Board of Education, the Lead Applicants presented an overview of the Tuxedo STEM Academy at George F. Baker High School Conversion Charter Application. This allowed an opportunity for the Tuxedo Board of Education to gather an understanding of the application for the Tuxedo STEM Academy at George F. Baker High School Conversion Charter School and to ask clarifying questions. At this meeting, two community members spoke in favor of the proposed conversion charter. The Greenwood Lake Superintendent spoke, on behalf of the GWL district, in opposition to the proposed conversion charter.

At the August 25th Special Meeting, the Tuxedo Board of Education conducted a Capacity Interview of the proposed Board of Trustees for the Tuxedo STEM Academy at George F. Baker High School Conversion Charter School. The Welcome and Overview utilized by SED was read as an introduction to and explanation of a Capacity Interview. The Founding Group provided introductions and an opening statement. This was followed by both general questions from the Tuxedo BOE about charter and conversion charter schools and more specific questions concerning the Tuxedo STEM Academy at George F. Baker High School.

At the September 4th Special Meeting of the Tuxedo UFSD Board of Education, the Board of Education approved the application for the Tuxedo STEM Academy at George F. Baker High School Conversion Charter School.

Based upon comments from the NYS Education Department, Office of School Innovation – Charter School Office, the Board of Trustees, Board of Education and Lead Applicants have agreed upon modifications to the application. These revisions were approved by the Tuxedo Board of Education at a Regular Board Meeting on December 18, 2014.

FINDINGS

Based upon the comprehensive review of the application and of the applicants, Founding Group, and proposed Board of Trustees, the Tuxedo Union Free School District makes the following findings:

1. The conversion charter school described in the application meets the requirements of Article 56 of Education Law (as amended) and other applicable laws, rules, and regulations. This finding is based on the following (among other things):
 - a. The applicant has included in the application the information required by §2851(2),
 - b. The applicant has conducted public outreach to solicit community input regarding the proposed charter school and to address comments received from the impacted community(ies) concerning the educational and programmatic needs of students in conformity with Education Law subdivision 2852(9-a)(b)(ii).
 - c. The granting of the application is likely to improve student learning and achievement and materially further the purposes set out in subdivision two of section twenty-eight hundred fifty. More specifically, the proposed conversion charter school, will:
 - i. *Improve student learning and achievement.* This will be accomplished by bringing the real world into the educational program through business partnerships and internships, utilizing problem based learning and hands on learning experience, focusing assessments on the process as well as the end product, focusing on the mastery of lifelong skill-base (critical thinking, leadership, problem solving, team work, collaboration, etc) necessary to be successful in STEM and non-STEM related fields, for example
 - ii. *Increase learning opportunities for all students, with special emphasis on expanded learning experiences for students who are at risk of academic failure.* This is evidenced by the specified general education and special education supports included in the Conversion Charter School design. In addition, the STEM program design allows for learning to meet the needs of individual students by the focus on process rather than end product only, hands-on real world experience, the Creative Design Plan, and overall assessment strategy, as examples.
 - iii. *Encourage the use of different and innovative teaching methods.* Students will be active learners and decision makers in their educational development, and will be actively engaged in project-based, collaborative learning with an emphasis on digital technology. Students will be able to choose one of the four pathways (Applied Science, Computer Science, Health Science and Environmental Science) as an area of focus for their educational program, or develop a Creative Design Plan that meets their individual interests and needs.
 - iv. *Create new professional opportunities for teachers, school administrators and other school personnel* by emphasizing creative student driven instruction incorporating the self-developed and integrated Standards of Practice with NYS diploma and graduation requirements. Additional evidence is clear by the plan to introduce the collaboration between industry professionals, professor of higher

- education and certified teachers in a classroom setting, as allowed by charter law.
- v. *Provide parents and students with expanded choices in the types of educational opportunities that are available in the public school system* by establishing the first conversion charter school in a non-urban area of the state allowing parents and students the choice of a small individualized setting focused on STEM, digital literacy and information technologies. This model may be replicated in both large and small districts throughout the state to introduce competition and continue the growth of excellence in educational offerings.
 - vi. *Provide schools with a method to change from rule-based to performance based accountability systems* by focusing on process based learning that values the thinking and the methods to arrive at a solution as much as the end result. In addition, the incorporation of portfolio, internships, job-shadowing shifts from the score related accountability to valuing the performance, demonstration of knowledge in real world situations, and application of knowledge.
2. The applicant has demonstrated the ability to operate the proposed charter school in an educationally and fiscally sound manner (Education Law §2852(2)(b). This finding is based on the following (among other things):
 - a. The presentation of the application that clearly and concisely describes the mission, key design elements, objectives, enrollment, recruitment and retention, and community to be served as defined by PCG project outcomes and recommendations, and required by the Tuxedo Board of Education.
 - b. The presentation in the application of a clear, sound, challenging and innovative educational plan, including curriculum and instruction, assessment, school climate and culture, special education supports as required by the Tuxedo Board of Education.
 - c. The presentation in the application of sound organizational and fiscal plan, meeting the requirements of the Tuxedo Board of Education in the areas of Founding Group capacity, Board of Trustees and Governance, management and staffing, evaluation, professional development, facilities, insurance, health, food and transportation services, family and community involvement, financial management, budget and cash flow and dissolution plan..
 - d. An understanding of the New York State Charter Schools Act, and the clearly demonstrated skill, determination and capacity to successfully launch and operate a high quality public charter school.
 3. Granting the proposed charter is likely to improve student learning and achievement, will materially further the purposes of the Act §2852(2)(c) and will have a significant educational benefit to students expected to attend the charter school §2852(2)(d). This finding is based upon the totality of the information presented in the application and during the application review process, as summarized in this document.

RECOMMENDATIONS

Based on the Tuxedo Union Free School District Board of Education’s review and findings, the Tuxedo Board of Education recommends and requests that the New York State Board of Regents approve the proposal to establish the Tuxedo STEM Academy at George F. Baker High School Conversion Charter School to open in 2015 in Tuxedo, New York with a 2014/2015 planning year.