



PS / IS 217 Roosevelt Island School Green Roof Project WINS!

What are the results of the 2015 Participatory Budget (PB) Vote?

We have some exciting news to announce!

The results of the 2015 District 5 City Council PB Ballot votes are in.

Project # 5 - PS / IS 217 Green Roof project (\$500,000) WON!

This secures one third of the project cost, a major victory.

Congratulations to everyone who supported this effort.

How competitive was the vote?

Competition was fierce, sixteen projects were on the ballot from the District 5 territory of Upper East Side, Midtown East and Roosevelt Island. There were only two winners, both were for schools, one for our PS / IS 217 STEM Green Roof.

How monumental are these vote results?

Participatory Budget Process bubbles up from the community, annually residents submit community projects, and only a small percentage of those projects are eligible to be on the ballot. The projects must be enduring, more than 5 years, must cost more than \$35,000, and must have high impact on the community. Last year only about 500 voters came out to participate in PB 2014, this year over 2000 people turned out. To put it in perspective, on Roosevelt Island there were only four poll date opportunities to vote, while Manhattan had over twenty dates to vote. Our STEM Green Roof received over one third of ALL votes! We definitely got the attention of our City Council member Ben Kallos, and that is a good thing.

How is it possible that a small island has such a big voice to win?

PS / IS 217 leadership and 217PTA care about engaging students with 21st century learning opportunities and work hard with the surrounding community. Several island

organizations and residents wrote support letters for the Green Roof project and hit the streets, told their building residents, encouraged friends and family to vote in support of the school. And of course, PS / IS 217 parents and caregivers cared about the Green Roof project and took time out of their busy schedules to voice their choice with a vote!

What is the history of the PS / IS 217 Green Roof project?

In 2013, Principal Beckman, with great support from the PTA, applied to the Manhattan Borough President's office for a \$35,000 Green Roof feasibility study and won! That was the important first step. The School Construction Authority (SCA) met with PS / IS 217 leadership to discuss what could be built up on the roof to further 21st century learning. SCA then toured the roof, and did a thorough safety analysis and project cost report with input from engineers, architects, designers and PS / IS 217 educators and custodial team. The SCA deemed the project was feasible and PS / IS 217 was cleared to move on to the funding stage, a huge win.

What features were discussed for the Green Roof project?

Principal Beckman and Ms. Fokine toured the roof with SCA and the school custodial team and dreamt of an amphitheater for performance, art and dance, a shaded space for middle school students to work on essays, homework and relax, in addition to STEM green roof garden education for all age groups and curricula to tap into. Also discussed were examples of renewable energy sources like solar panels, wind turbines and photovoltaic features, a tech hub home base where students could collect data measurements such as air quality and weather conditions. Art and photography classes inspired by birdlife, as well as using the natural environment to test real world sustainability projects were also encouraged.

How much does an educational Green Roof cost?

The School Construction Authority is working with other NYC schools to take advantage of extending the classroom on rooftops throughout New York City, and the cost is around \$1.5M. The budget created for PS / IS 217 for their 6,750 square feet of extended classroom was also \$1.5M, that amount accounts for inflation over two years of budget cycles.

Who funds Green Roofs?

Schools must go through the SCA for approval, and then apply for capital funding with the Manhattan Borough President Gale A. Brewer's office. In February 2015 Principal Beckman applied to the Borough President's office for capital funding in the total budget amount of \$1.5M, and will hear results in June 2015. Since Green Roofs help cities stay healthy and are expensive, multi-year, legacy projects that will impact generations of

students, the SCA allows for funding to stretch over two calendar year cycles. Green roofs are typically funded by the Borough President's office, and the City Council, who work together, the Participatory Budget process was an additional opportunity. Funding may include other government sources, and even private donations.

What happens next?

Council Member Kallos now needs to submit the win of \$500,000 formally to the Council. Since projects were vetted by each agency, in our case, SCA, prior to their inclusion on the ballot, no issues are anticipated with the winning projects. Principal Beckman will convey the win to the Manhattan Borough President's office so they can reduce the original ask for capital in February from \$1.5M to \$1M. With a third of the funding soon to be in place, the STEM Green Roof project is well on its way.

Does a Green Roof only teach kids about nutrition and gardening with plants?

No. It is true that school gardens have benefits such changing eating habits and connecting children to the environment, but they also improve test scores, fight obesity, promote physical activity and changing attitudes towards learning in all subjects.

Are their real world examples of school Green Roof's advancing students knowledge?

Yes, here are just a few examples, in the Bronx, at The Bronx Academy of Design & Construction where Bronx students were the youngest to present professional level work at the World Renewable Energy Forum attended by U.S. Secretary of Energy. Student findings confirm that solar panels placed above a plant covered roof kept the roof up to three degrees cooler. Article here: [bronx schools green roof taking students far](#)

Also, PS 6 has a green roof and won Green Roofs for Healthy Cities award, article here: [PS 6 Green Roof wins Healthy City award.](#)

And in the Spring 2013 NYC, PS 333 Manhattan School for Children, used a rooftop greenhouse as science lab for students and teachers. This example uses hydroponic farming technology to educate students and teachers about the science of sustainability.

Video here: [NYC Greenhouse Project at PS 333 for K-8](#)

Why is a Green Roof valuable to our school and community?

The economy / Cooper Union report:

Reduce "Heat Island Effect": Air quality is affected by heat, as temperature rises, ozone depletion increases. Green Roofs cool the air and clean the air, capture pollutants, filter noxious gasses, decreasing asthma and other pulmonary diseases.

Insulation: Green Roofs are insulators saving heating and cooling costs.

Increase Roof Longevity: Green roofs protect against direct sun exposure, reduce environmental wear and tear, and increase the systems life span.

Storm Water (Rain Water) Management: Green roofs retain 50–75% of rain fall, easing the pressure on the combined sewage overflow system by never entering the city’s sewer system. Less stormwater runoff less pollution flowing into our rivers.

Noise Reduction: Green Roofs assist to quiet city and mechanical equipment noise.

Does a Green Roof foster education?

Yes, a green roof fosters education.

One example is the Case Study: Boston Latin School Green Roof whose plans include:

- A year-round laboratory, classroom facility, research station, teacher-training center, garden and fresh-food producer and renewable energy source.
- A space for exciting science experiments and a safe place for students to be outdoors, increasing positive mental health while decreasing stress.
- A cafeteria farm and greenhouse to grow healthy food for the school cafeteria while serving as a laboratory for lessons about botany, biology, health and nutrition.
- Renewable energy installations that generate hot water for the school and further reduce the school’s operating costs and carbon footprint.
- Landscaped gardens that provide habitat for birds, bees, and insects while providing contemplative spaces where students can explore nature and our role as stewards of the planet through the arts and literature.
- Webcams, interactive information kiosks and sophisticated energy and air-quality monitoring instrumentation that will stream real-time data from the lessons online.

What other curricula can be taught on a STEM green roof?

A few curriculum samples are:

Grade: 7 School Garden Dichotomous Key - Students will investigate the diversity of living organisms and how they can be compared scientifically. Students will create a Dichotomous Key like scientists use to figure out the scientific names of organisms.

Grade Level: 8 Grade Statistics Garden - Students distinguish the correct mathematical tool mean, median, or mode to answer questions based on data they have recorded using samples from the garden. The students will discern which term mean, median, or mode is the appropriate mathematical tool to answer questions regarding garden and nutrition data.

Grade Level: K - 4 Cardinal directions without a compass - Students learn how to determine the four cardinal directions using two methods. One uses a standard clock (with hands) and the other uses sticks and shadows.

Grade Level: 4-5 Garden Changes Over Time - Work in pairs to measure the length and width of the garden, create a grid and map.

Music, art, writing, and foreign languages are important. Will they be de-emphasized with a green roof?

Our school, 217, is committed to the development of the whole child. We will continue to have excellent enrichment resources including music, art, writing, foreign languages, physical education, and cultural studies and 6,750 square feet of extended learning space suits that goal.

How long does a legacy project like this take?

Approximately three years. The SCA will not start the bidding process until all the funds are committed. The faster the commitment, the sooner the bid process starts. Winning funds in 2015 means access to them in 2016, likewise, winning funds in 2016 means available in 2017. Traditionally, a full design, in partnership with the school, would take 4-5 months, bidding and awarding a contract would take 2-3 months. Then the project is green lit for actual creation of the green roof which takes approximately a year. 2018, if successful, could unveil and launch green roof for students of P.S./I.S. 217 and the community for generations to come.

Who are some of the community supporters of our Green Roof?

In addition to Principal Beckman, Ursula Fokine, and the full power of the 217PTA's talent and reach, Council member Ben Kallos and his team came to the island to explain the process, Roosevelt Island Garden Club leadership, Girl Scouts troops 3001, led by Aiesha Eleusizov, and 3244, led by Janine Schaefer, on Roosevelt Island, Main Street Theater and Dance Alliance, Roosevelt Island Historical Society, NYPL Roosevelt Island branch, Roosevelt Islander blog, The WIRE, RIRA president Jeffrey Escobar, parents from Eva Bosbach's RI Parents' Network, neighborhood building's management offices all blasted the news, groups welcomed us to talk about the project at member meetings and island shops, restaurants and residents all rallied to get out the vote. Enjoy this campaign video produced by Aiesha Eleusizov's Brownies from Girl Scout Troop 3001 that explains the project [Girl Scout video on PS IS 217 Green Roof](#)

What happens during summer?

Our knowledgeable custodial A-Team will be involved and PS / IS 217 has strong ties with the Roosevelt Island community, the school has made relationships that bond opportunities to collaborate the local garden club, scouts, and others for year round care and support. And of course, parents and teachers who wish to be involved are welcome, even non-green thumbs who want to learn!

How does the green roof impact the community?

A green roof provides more than a much needed learning hub for 21st century skills; it excites students about new careers, it creates a beautiful extended view for residents, it reduces pollution stormwater runoff into our rivers, it allows city children not often exposed to nature to benefit from its calming qualities, reduces energy consumption for air conditioning in the summer, captures pollutants, filter noxious gasses and decreases asthma and other pulmonary diseases, mitigates heat effect by cooling the air around the green roof, and improved air quality on the Island. It will also provide a concrete example to explain and teach about important environmental and scientific lessons and concepts, and possibly inspire some budding young scientists. Green roofs also impact the community at large because they quiet city and mechanical equipment noise.

What can I do to support the Green Roof project?

This is a multi-year effort, keep spreading the word about the values of a Green Roof! Green Roofs provide our students with a peaceful place where they can learn about science and renewable energy as well as art, performance, photography and dance. Some long term benefits include clean air, saving energy costs, allowing students to master renewable energy sources, using photovoltaic panels, wind turbines and solar panels and even collect data to monitor changes in air quality, growing healthy food to curb obesity and promote physical activity and getting children engaged in science to spark careers and further education. This is a marathon effort worth the wait but we need your support especially educating others on the benefits of green roof learning.

The green roof is about the future of the school and the bond to the community. PS IS 217 school and many in the community have a vision which includes a STEM green roof that allows all grades to understand what they are learning with engaging hands on experiences. A green roof could serve as an anchor to attract a vibrant student body. Supporting a green roof is one way the community can support offering 21st century learning in a captivating way that engages and excites our young people and their families. Engaging students today, may bring us scientists, urban planners, architects, teachers, engineers, farmers, doctors, politicians, policy makers, programmers and stewards of our planet, tomorrow.

We strive to offer memorable teaching in real world settings. We embrace hands-on education that springboards off of strong in-class learning. PS / IS 217 believes that having 6,750 square feet of extended classroom learning on the roof will help us reach that goal.

We hope you'll be as thrilled with the news as the rest of us are!

We are honored to be awarded 2015 Participatory Budget funding and thank City Council member Ben Kallos and his team for this opportunity.

We wish all the ballot projects could win because they are all important.

Thanks to all in our community who gave non-stop support for the Green Roof project.