

# GLOBAL EXCHANGE

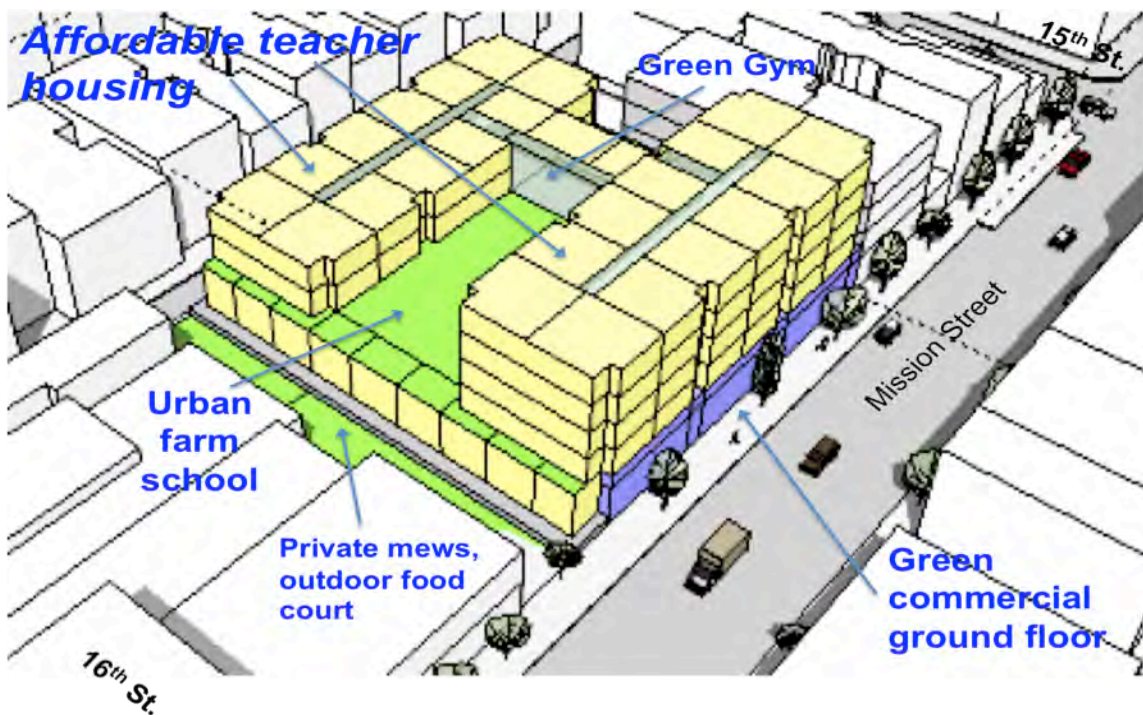
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## Creating a Green Economy Center at 1950 Mission Street

### Summary

The central goal in developing a mixed-use (residential/commercial) building at 1950 Mission Street in San Francisco, is to create a new kind of educational institution that houses teachers in affordable green housing, and also creates public space that educates and mobilizes the public around sustainability (energy efficiency, renewable energy, clean-tech, organic urban agriculture, green community development).

The bottom floor GreenMart commercial space will feature all the most cutting-edge green goods and services, with sales revenue supporting the educational components of the building. Currently, the Bay Area does not have a one-stop-shopping location for all the most up-to-date green products.



This is the balanced model of enterprise and education that we have pioneered in event form (GreenFestivals.org) for ten years in six cities, including San Francisco where this building is being planned on an empty lot owned by the school district. The relationships we have built with hundreds of green companies, hundreds of excellent authors/speakers, and millions of customers will form the market basis of this institution's success.

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This real estate prototype will be replicable in many cities that have (1) vacant land owned by the city or school district, (2) a need to attract and retain good teachers, and (3) the need for a green economy center. The model provides a convergence platform for uniting all the best organizations, generating new ideas from the synergy of technologies that are now in silos. Plus, teaching teachers about these crucial issues has a great social multiplier effect, spreading green wisdom to the generation that will be running the world when environmental challenges will be much greater than they are today.



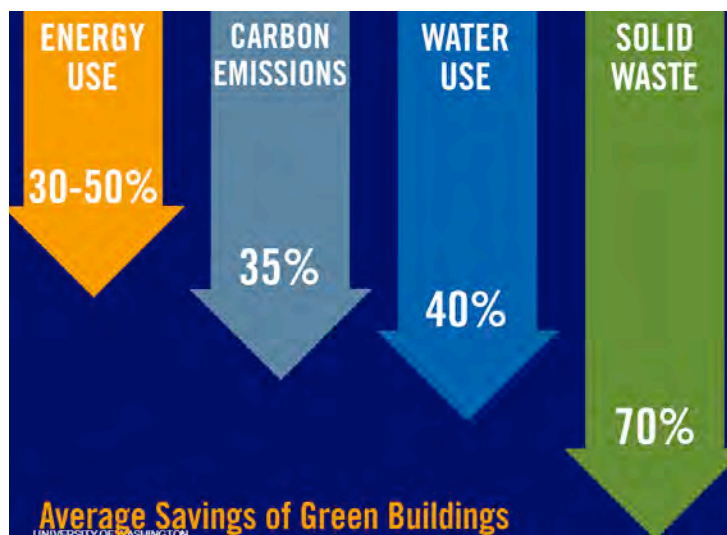
Feed-in tariffs are coming to California soon, so by designing the building as a super-efficient conserver and generator of power, rather than just a consumer of power, the building itself can generate profit. Money generated from feed-in tariffs will be dedicated to a college scholarship fund for low-income youth of the neighborhood who are interested in pursuing a career in the green economy. The building will put more energy back into the grid than it takes out by integrating a mix of the following:

- An Eco-Gym in which all the rowing machines, stationary bicycles, arm cranks, etc., generate electricity into the building;
- Eco-Playground in which the see-saws generate electricity, and the merry-go-round pumps water up into a storage tank on the roof that feeds a drip irrigation system for food crops growing on the terraces and in the large, south-facing courtyard;
- Excess water from the rooftop water tank will fall through mini-hydro generators that will power flat panel displays in public areas explaining all these systems and highlighting the companies that provided the equipment;
- Recharging stations will be located in the garage for electric vehicles;
- The building will maximize day-lighting and will feature the most efficient windows and lighting throughout the residential and commercial portions of the building;
- The dance floor in the entertainment space will feature under-floor LED lights that light up from the pressure of feet;
- The building will bristle with innovative wind and solar harvesting;
- Fuel cell technology will store energy and provide educational opportunities for the many public tours of the building;

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- We will build and operate a large teaching farm in the courtyard and terraces, with the food purchased by the food court of the building;
- We will compost all biomass and food scraps generated on the site for use on the buildings many gardens, thus closing the circle of biological energy;
- The co-generation plant in the basement will bio-remediate the building's grey water and black water, trapping methane that will be used to power generators;
- All appliances will be Energy Star, and other energy consuming devices (e.g., elevators, automatic window blinds) will be the most efficient available;
- State-of-the-art ventilation and motion sensors for lights and fans will ensure the highest levels of fresh air circulation, thermal comfort, and energy efficiency;
- Through ground-sourced heat exchange, and heat recovery systems in the building, we will maximize thermal efficiency and reduce energy costs;
- Advanced data tracking will integrate building performance and community development results from our many educational/outreach programs, which will add to our body of knowledge for advancing collaboration among public agencies, private sector and non-profit organizations (the data will help make this prototype building replicable in other cities);
- We will focus great attention on educating residents and visitors about sustainable energy production and consumption, because the main source of all inefficiency (*and* potential solutions) is right between our ears.



Communities need education and training regarding sustainability. As our natural resource base continues to be degraded, capital, policies and jobs are shifting in a green direction. This creates enterprise opportunities and career track possibilities for inner city residents. Teachers provide the best social multiplier for green education, so making green education available to large numbers of teachers, right where they live, will achieve widespread social impact.

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The 1950 Mission Street project is a mixed-use real estate model that will synergize the following elements:

- Affordable green housing mainly for teachers, but also first responders (police, firefighters, EMTs), and leaders of CBOs (community-based organizations) in the neighborhood;
- A GreenMart eco-mall featuring the major product lines of the green economy where students and teachers can learn enterprise skills and generate revenue for neighborhood development projects;
- A food court—featuring locally grown organic food, including food grown on-site in the courtyard gardens—where students and teachers will learn about nutrition and its relationship to agriculture;
- A Green Enterprise Incubator where clean-tech start-ups can collaborate and launch new green enterprises to create green jobs in the neighborhood (see Appendix One);
- The Green Guardians service learning program developing green curriculum and participatory community development strategies (see Appendix Two);
- Event and meeting venues for lectures, conferences, musical performances, film screenings, poetry slams, and training programs.



The young generation now in our school system will be forced to deal with environmental calamities that we can hardly imagine. But that dire situation also presents opportunities for green technology and business models that break with our nature-destroying ways of the past. As natural resources get depleted, the profitability of conserving and restoring nature will rise steadily.

By housing teachers in a green energy center with an abundance of green programming, we will equip them for training the leaders of tomorrow. Strategically located on a mass transit hub, 1950 Mission Street will be first and foremost an educational institution, introducing the tenants and the general public to the most cutting edge clean-tech innovations for sustainability. By providing teachers with affordable housing, we will help the San Francisco Unified School District (SFUSD) attract and retain talented

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educators who might otherwise shun our expensive city. This building will become a model for other neighborhoods and other cities.

## **Prospective Tenants**

The 80 green residential apartments will rent at roughly half the normal rents for this part of the city: the savings from the free land (\$1/year land lease) provided by the school district will be passed on to residents in the form of below-market rents. This, plus the transit oriented nature of the building (it sits on a BART station and major bus lines), and its green features, will mean there will be a waiting list for residential tenants and that will drop the vacancy rate to near zero, improving the profitability of the building.



In addition to providing affordable housing for teachers, first responders, and community workers, the Green Energy Center will include retail and office tenants involved in accelerating the transition to a green and fair economy. The organizations that will participate in this enterprise will include some of the most talented and reputable institutions involved in sustainable energy issues: Thompson/Dorfman Partners, Mithun architects, Green Festivals Inc., the Roseben Foundation, Global Exchange, Recurve, iReuse, Green America Business Network, Investors Circle, Social Venture Network, Alter-Eco Americas, Solar Living Institute, Good Capital, and a host of others who we have been recruiting to this project for the past three years.

Below is a partial list of partner organizations that have expressed interest in renting space and presenting programs in the Center.

- San Francisco Department of the Environment has a training/outreach program that trains low-income residents in eco-literacy and they fan out across the city, educating and mobilizing the public about a wide range of green issues: recycling, composting, energy efficiency, renewable energy, biofuels, and more.
- Green Festivals: the largest sustainability events in the Americas, founded in San Francisco by Dr. Kevin Danaher, the Executive Director of the Global Citizen

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Center. These events occur in San Francisco, Washington, DC, Chicago, Seattle, New York and Los Angeles. We have contracts with more than 400 companies and nonprofit organizations, which provide us with a fertile network for recruiting tenants and customers to the Green Energy Center.

- Global Exchange is a human rights organization that for 21 years has been based at 16<sup>th</sup> and Mission (200 feet from the site) and has good relationships with enterprises and non-profits in the neighborhood surrounding 1950 Mission Street.
- Recurve Inc.: providers of building energy audits, and designers of renewable energy systems for residential and commercial buildings.
- iReuse: developers of cutting-edge software for measuring and managing building energy efficiency.
- Investors Circle: a network of angel and early-stage investors focusing on local and social enterprise.
- Social Venture Network links hundreds of socially conscious entrepreneurs to accelerate the transition to a triple-bottom-line economy (balancing financial sustainability, social equity, and environmental restoration).
- Roseben Foundation supports grassroots social justice and environmental efforts.
- Earthsite: Provider of website design, development, marketing, and consulting regarding digital media and education.
- Urban Alliance for Sustainability educates the public about practical ways to bring sustainability into our daily lives.



## **Synergy from Convergence**

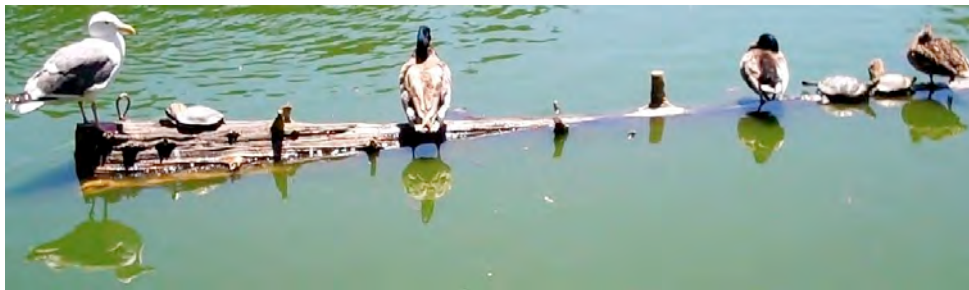
Our real estate model capitalizes on the fact that individuals and organizations gain greater effectiveness when they collaborate in networks. For 21 years, Global Exchange has been opening and running fair trade stores, organizing 90 Reality Tours per year to more than 30 countries, organizing large public events, and accumulating tens of

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thousands of supporters. In collaboration with Green America, we are in our ninth year of Green Festivals ([greenfestivals.org](http://greenfestivals.org)): weekend events bringing together more than 300 green economy exhibits, more than 150 speakers, organic vegetarian restaurants, diverse live music, and 30,000-45,000 attendees. While establishing this track record we have developed close ties with hundreds of green enterprises and nonprofit environmental groups. This gives us a large base to recruit office and retail tenants from. And when we open the retail/public portions of the building, we will have tens of thousands of customers who already know us from our previous work.

The Nonprofit Centers Network links co-location nonprofit centers from all over the U.S. and Canada. Dozens of these nonprofit centers have established policies of collaboration that help each group increase their efficiency and effectiveness. We are a member of the Nonprofit Centers Network and we will benefit from this accumulated wisdom. We will be the first such center in the nation to unite enterprises, nonprofits, government agencies, and teachers, all focused on accelerating our transition to the green economy.



Collaboration among tenants can take many forms.

- Affordable private offices and open work areas for diverse institutions will bring together people and organizations with similar goals;
- Shared common space, including reception, copy/printing room, event space, a plant-filled courtyard, and conference rooms will provide multiple opportunities for people to create stronger community relationships;
- A food court featuring locally grown organic food (including from the on-site gardens) will create space for residents and the general public to come together to learn about nutrition and agriculture, while enjoying tasty food and drink;
- Exhibitions, hands-on demonstrations and trade-shows providing educational information on green products and technology will elevate everyone's understanding of recent developments in clean-tech and green community development;
- Cultural performances with live audiences and radio/video web broadcasting will enliven the site and spread the word on the sheer fun of green living;
- Eco-Gym team competitions to see who can generate the most electricity from

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stationary bicycles, rowing machines, and other kinetic exercisers that generate electricity to help power the building.

1950 Mission Street is located within 100 feet of a BART subway station and the intersection of two major bus lines. There is a large public parking garage less than one block from the site. The site has excellent zoning, and based on our initial meetings with the Planning Department, we are confident that our uses for the building will be entitled.

## **Financial Model**

Most of the capitalization of this prototype will come from a debt instrument known as Certificates of Participation. School districts in California can issue a bond, without needing approval of the voters, and the bond is paid for with the rent revenue stream of the apartments. Our developers, Thompson/Dorfman Partners, have financed three teacher housing complexes using this financing mechanism. There is a solid track record of these three previous sites, and school boards and the resident teachers love these developments.

Other possible sources of funding include:

- Assisted Housing Stability and Energy and Green Retrofit Grants: These federal monies promote equitable, affordable housing, and to make energy and green retrofit investments in the property, to ensure the maintenance and preservation of the property, the continued operation and maintenance of energy efficiency technologies. HUD may offer either a Green Retrofit Grant, or a Green Retrofit Loan repayable from a share of Surplus Cash and from sale and refinancing proceeds, of up to \$15,000 per unit for an individual Eligible Project (eligible projects include properties receiving project-based assistance pursuant to section 202 of the Housing Act of 1959 (12 U.S.C. 17012), section 811 of the Cranston- Gonzalez National Affordable Housing Act (42 U.S.C. 8013, or Section 8 of the United States Housing Act of 1937, as amended (42 U.S.C. 1437f).
- HUD's Community Challenge Planning Grant Program fosters reforms and reduces barriers to achieving affordable, economically vital, and sustainable communities. Efforts may include amending or replacing local building codes, or promoting mixed-use development, affordable housing, the reuse of older buildings and structures for new purposes, and similar activities with the *goal of promoting sustainability* at the local or neighborhood level.
- Energy Efficiency and Conservation Block Grants from the Department of Energy: These are intended to assist U.S. cities, counties, states, territories, and Indian tribes to develop, promote, implement, and manage energy efficiency and conservation projects and programs designed to: reduce fossil fuel emissions; reduce the total energy use of the eligible entities; improve energy efficiency in the transportation, building, and other appropriate sectors; and create and retain jobs.
- Department of Energy Grants for Electricity Delivery and Energy Reliability, Research, Development and Analysis: These federal grants aim to develop cost-effective

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technology that enhances the reliability, efficiency, and resiliency of the electric grid, while enabling the effective utilization of emerging and renewable generation sources and promoting the rapid deployment and integration of advanced digital Smart Grid technology that is needed to modernize the nation's electric delivery network for enhanced operational intelligence and connectivity.

- Department of Labor Community-Based Job Training Grants: These grants support workforce training for high-growth/high-demand industries through the one-stop career centers and community colleges. We could qualify for these grants due to our ongoing partnership with Goodwill Industries and City College of San Francisco training low-income residents in green career skills, especially energy efficiency.



## **Exhibition**

Exhibitions can be divided into short-term and long-term. Short-term exhibitions will be tied to events. Long-term exhibitions are a form of corporate sponsorship tied to general education activities. While long-term exhibitions recruit corporate sponsors for year-round displays, short-term exhibitions can run monthly, demonstrating some specific facet of the Green Economy. We will work with sponsoring companies and exhibit production companies to produce focused educational displays in the public areas of the building. In collaboration with our tenants, we will organize an outreach program to the public schools to regularly bring in classes to learn about Green Energy and the Green Economy.

## **Events**

Cultural events will include music, films, dancing, and theatrical presentations. Educational events will include lectures, product demonstrations, classes, and workshops. Community events will assist local grassroots groups and city government agencies to improve the living conditions in the neighborhood by organizing clean-up campaigns, tree planting, recycling and composting, cultural events, and a range of other community betterment activities.



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### **Digital Media Center**

The building will include a digital media center, generating support for our work with all manner of distribution modes and technologies. We already have close relations with many national publications, radio stations, website developers, audio and video productions teams, and Second Life property developers. These relationships will allow us to maximize our outreach to people at home and abroad, through a diverse set of media. The building at 1950 Mission will also have a close relationship with the large building we have constructed in Second Life, the virtual reality space. Our GreenMart building in Second Life will be tenanted by many of the same green companies that come to the Green Festivals. This virtual GreenMart will allow customers from anywhere in the world to order products, convene meetings, and generally build solidarity on a global level (most of Second Life's several million members are outside the USA).

### **A Green Neighborhood Development Model**

We are committed to the LEED-Neighborhood Development (LEED-ND) model developed by the U.S. Green Building Council, and will use it as a guide for our community development work. For instance, among LEED-ND criteria is to locate along a major transportation corridor. The proposed site is within 150 feet of a Bay Area Rapid Transit (BART) station, as well as two major bus lines. We will translate LEED-ND's academic criteria for greening a neighborhood into popular educational materials. Our **Green Guardians** program (see Appendix Two), will train neighborhood residents in a wide range of green career skills (renewable energy, energy efficiency, recycling and composting, urban organic agriculture, water conservation, public education, etc.). We have already developed a GreenGuardians.ning.com website with 200 green career training videos and a multitude of other green job resources.

Global Exchange has been located at 16<sup>th</sup> and Mission for 21 years and we know the neighborhood well. We are committed to raising the living standards in this troubled neighborhood while avoiding gentrification. For a video presentation linking this real estate model to two others (rural eco-university and urban Eco-Industrial Park):  
<http://www.youtube.com/watch?v=GNI6wIGfFxE>



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## APPENDIX ONE **Green Enterprise Incubator**

It is imperative that we accelerate the transition to a green economy that makes its profits by healing nature rather than destroying it. A growing percentage of taxpayers understand that we must shift our economic model toward biomimicry: studying how nature operates and then bringing our economic model into harmony with nature. Capital is starting to shift in this direction but green research and development is fragmented and uncoordinated. There is a need for an institution that unites the green R&D of government, private enterprise and non-profits, and can be replicated in many cities.

The Green Enterprise Incubator will be a collaborative platform for area colleges, green companies, non-profits, and government agencies to create an incubator for developing green curriculum and green career skills, promoting clean-tech research and green enterprise development, patenting green technology, and greening the campuses of schools, government and corporations. The collaboration of these three primary sectors (government, enterprise, non-profits) will result in benefits for all: new technology to reduce the effects of global warming, personnel with green career skills, and financial models that channel capital into the most productive areas for slowing humanity's negative impact on the environment.

Many campuses and college systems (e.g., City College of San Francisco, Los Angeles County Community College District) are developing sustainability plans that can be drawn from. Students and faculty can research the best aspects of these plans and incorporate them into the work of the Green Enterprise Incubator. The resulting greening plan will be useful to hundreds of campuses that have not yet embarked on this journey. As we develop a successful institutional model, we can help people in other cities replicate their own localized version of this model.

### **An Existing Model**

The Centre for Interactive Research on Sustainability (CIRS) in Vancouver is a collaboration between University of British Columbia, the British Columbia Institute of Technology, Simon Fraser University, and the Emily Carr Institute. Together they are creating a living laboratory where business and academics come together to develop cutting edge technologies for saving people and planet through eco-design. Their building aims to deliver 100% of lighting requirements during the day from solar, rainwater collection for all non-potable water uses, natural ventilation, building-integrated solar energy, etc.. By using a consortium model, the CIRS shares expenses and synergizes human and material resources, benefiting all the participating institutions and the local economy of Vancouver.

### **Activities of the Green Enterprise Incubator**

- research into clean-tech (patenting of new green technology), and green business plans (enterprise incubator);



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- hands-on, cross-sectoral curriculum development;
- speaking events, films, cultural events (music, dancing, art shows);
- community education and training (LEED-ND green development guidelines) coupled with hands-on community betterment projects;
- cross-fertilizing constituencies that don't usually mix (e.g., youth and elder mentors);
- fomenting the green consciousness that will be necessary to save the planet.

## APPENDIX TWO

### **Green Guardians**

#### Eco-Education and Green Career Training

The Green Guardians is a green career training program that will recruit young people with leadership potential and train them in green community service skills such as energy efficiency, recycling, composting, tree planting, green building technology, digital media skills, urban agriculture, conflict resolution, public education, and other important career skills. We will initially focus on recruiting a core group of diverse, low-income San Franciscans who would otherwise not get the opportunity to develop a secure career track. This group will be trained to become trainers who can then go out and train more trainers, and so on, spreading their greening skills throughout San Francisco, the Bay Area and eventually the state. By connecting talented people with green organizations that can impart technical and social skills, and connecting them to green career courses at City College of San Francisco, we will create a green workforce development program with potential ramifications across the country.

Our training will include an emphasis on entrepreneurial skills and green business start-up assistance. The green economy is booming, offering enterprise opportunities in fields such as energy efficiency, renewable energy, biofuels, organic agriculture, green building, recycling and composting. Our close relationship with GreenBusinessOwner.com and other resource organizations will help us provide young entrepreneurs with the resources they need to take their ideas into marketplace.

#### Description of Program

- Two non-profit organizations, Global Exchange and the Global Citizen Center, will develop a standing corps, known as Green Guardians, who will receive training and tools to enable them to become highly visible public champions of environmental stewardship and peaceful urban living. The Green Guardians program will include the following elements:
  - Stipended interns will be carefully recruited to receive training in a wide range of green community development skills. The program will enjoy the collaboration of reputable non-profits, green enterprises, and city

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government agencies with specialized expertise that will be shared with the Green Guardian recruits. Each apprentice will be paid a stipend to attend work sessions. They will also get connected to green career courses and professors at City College of San Francisco.

- In addition to their training activities, each apprentice eventually will be tasked with (1) organizing activities in their neighborhood which can become the basis for neighborhood-based Green Guardian chapters, and (2) recruiting volunteers for future expansion of the program.
- The apprentices will receive training in areas such as:
  - Public outreach and education, especially on energy and environmental issues;
  - Urban greening practices;
  - Promotion of recycling and composting programs;
  - Green building technology and building energy audits;
  - Urban agriculture, organic gardening, and tree planting;
  - Volunteer recruitment, training and coordination;
  - Public safety procedures; and
  - Nonviolent conflict resolution.
- Examples of Green Guardians work will include:
  - Street clean-ups and tree planting in collaboration with SF Green Connect and Friends of the Urban Forest;
  - Publicly interactive recycling/composting programs, including the dissemination of surveys to understand why people compost and recycle or why they fail to do so, in collaboration with the SF Department of Environment;
  - Public education actions and trainings in collaboration with the SF Urban Alliance for Sustainability; and
  - Participation in the large volunteer program that runs the SF Green Festival, an event that achieves a 96% diversion rate of waste;
  - Parties and recreational outings to build a strong positive community that holds environmental sustainability and social justice as core values.
- Job training and placement will be provided for Guardians who stay with the program for a certain period of time and meet equal opportunity selection criteria.
- Additional incentives, such as Green Guardian T-shirts, free access to events, gratitude parties, local store/restaurant discounts will be used to

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encourage youth to participate in the Green Guardian program and to thank them for their efforts.

- To the greatest extent possible, the Green Guardians will be organized by neighborhood. The Guardians will work in the neighborhood in which they live, in order to achieve the maximum contact and interaction with individuals and organizations in their immediate community.

## Value of the Program

- This program will assist the San Francisco Department of Environment (SFDOE) to achieve its goal of “*grow[ing] an enthusiastic, educated, sustainable group of residents dedicated to enhancing the experience of city living.*” The Green Guardians will represent the diversity and varied interests of San Francisco’s neighborhoods. The incentives will encourage the Guardians to stay with the program, recruit other residents, and thereby build a skilled group of volunteers who can be tapped for community betterment programs.
- Specific work of the Green Guardians, including waste reduction surveys, will help SFDOE understand how to “*increase residential composting and recycling rates*” and will help with the implementation of waste reduction programs.
- Working with neighborhood youth will also build community around the principles and activities of the next economy: the green economy.
- The Guardians contribute directly to raising the quality of life in lower-income neighborhoods by educating and motivating the younger generation who will lead the movement toward a sustainable and just economy.
- High school students who complete the Green Guardians training will be assisted in enrolling in Green Careers courses at City College of San Francisco. We will also educate them about college scholarship opportunities at four-year colleges with strong environmental and green business programs.
- We will also help connect Green Guardians with internships, apprenticeships, and jobs at green companies, environmental non-profits, and government agencies. Our leadership role in the Green Festivals gives us contracts and personal relationships with several hundred green companies and environmental organizations.
- By training young people in green career skills we will diversify the labor pool for the growing number of green companies and environmental non-profits in northern California.

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