

AN URBAN OASIS

in BERKELEY



A Senior Project/Thesis
Presented to the Faculty of
the Landscape Architecture Department at
the University of California, Davis
In Partial Fulfillment of the Requirement for the
Degree of Bachelors of Science of
Landscape Architecture

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Abstract:

The purpose of this project is designing and transforming a pair of vacant lots in downtown Berkeley to promote sustainability, environmental awareness and social bonding through the practice of urban farming and growing, processing, and selling food, locally.

The project will enhance the local economy; provide jobs, public open space, and turn the site into a socially active hub. It will also serve as a great training tool that can give homeless individuals a relief and train them to gain experience for the possibility of advancing to a career.

The ultimate outcome is a design that provides connection between the two vacant lots in a functional way.

Acknowledgements:

I would like to acknowledge my Senior Project Committee Members: Elizabeth Boults, Gerrie Robinson, and Jennifer Ivanovich, and my Senior Project Advisor, Claire Napawan, for their help, support, encouragement and feedback during this research.

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Chapter 1

Introduction:



Figure 1-1

Urban agriculture is the growing, processing, and distribution of food and other products through intensive plant cultivation and animal husbandry in the cities. Urban agriculture can happen at different places around the city: greenbelts, the city's edge, community gardens, rooftops and inner-city lots. Urban agriculture is an alternative to vacant lots that immediately yields multiple benefits.

Urban agriculture includes food products from different types of crops and animals, as well as non-food products or combinations of these. Often the more perishable and relatively high-valued vegetables and animal products and by-products are favored. Production units in urban agriculture in general tend to be more specialized than rural and industrial agricultural enterprises. (What)

The Food and Agriculture Organization of the United Nations (FAO), has defined urban agriculture as: "An industry that produces, processes and markets food and fuel, largely in response to the daily demand of consumers within a town, city, or metropolis, on land and water dispersed throughout the urban area, applying intensive production methods, using and reusing natural resources and urban wastes to yield a diversity of crops and livestock." (Smit)

Chapter 2

Research:

Urban agricultural practices have in most cases been used as a way to promote “food security”, mainly focusing on agricultural production as a way to provide access to healthier food for the poor. This has resulted in an important part of urban agricultural production being used for self-consumption, with surpluses being traded or donated. However, the importance of the market-oriented urban agriculture, both in volume and economic value, should not be dismissed. (Carpenter)

While industrial agricultural practices base their profits on mass production, urban agriculture can compete by providing produce that is healthier, by being farmed in a more organic way, more local, by non-standardized and site specific varieties of produce, and with a better and more natural flavor, by putting more attention to all the inputs of the system.

Markets in the Bay Area and Distribution Challenges:

A growing consumer demand for fresh, local, and often-organic food creates new markets for urban food production. Farmers within the

cities are responding to, among other trends, the growing desire of urbanites to buy fresh, nutritious produce, meat and dairy products grown close to their homes. Farmers tend to grow multiple crops, meats, and value-added products and sell to multiple markets. These particular niches tend to be related to high-end consumers, as the flexibility in production can provide higher quality of produce, and fulfill market specific needs.

(Figure 2-1)

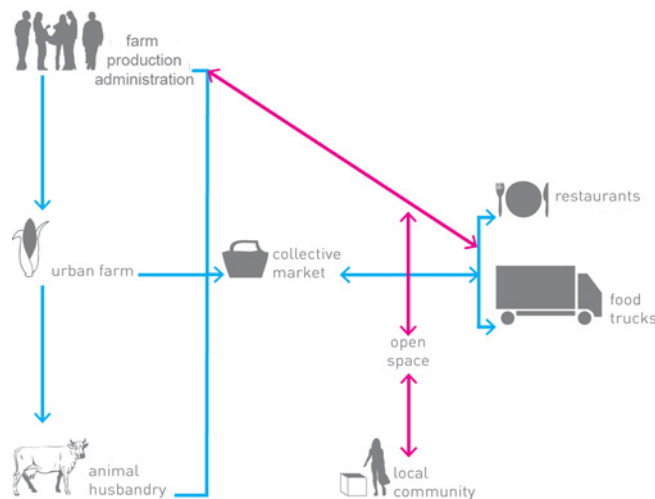


Figure 2-1

Historically, the East Bay has been an innovator in the Food System. The opening of “Chez Panisse” in 1971 helped set in motion the movement of “Local Food”, which is now reforming the American Food system. The restaurant focused on the social and environmental benefits of farming sustainably and helped spur the growth of organic and local

agriculture. Since the opening of “Chez Panisse” in the 1970's, there has been an enormous development of organic and local Food restaurants and markets in the East bay. Most of these spaces of distribution are located in North Berkeley and Downtown Oakland. (Francis)



Figure 2-2

Current State of Urban Agriculture in Berkeley:

Along with the development of a new food industry in the East Bay, the urban agriculture industry has emerged in the Bay Area. Urban agriculture has taken two main directions; on one hand, it has become a way for the lower classes to generate their own food, dealing with the concept of food security. On the other hand, urban agriculture has emerged as a way to supply healthy, local, organic and high value food

to the high-end community. (Rich)

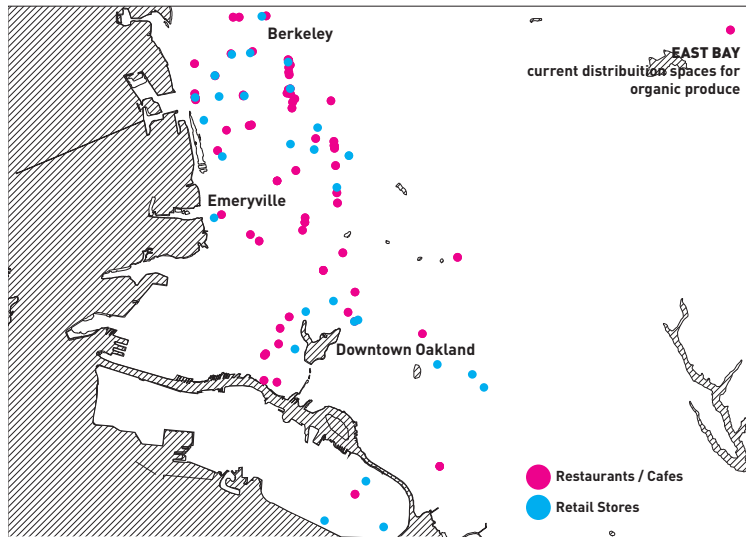


Figure 2-3

Berkeley has been very active in the development of urban agriculture. Several organizations have created community gardens, and developed “grow your own food” programs around poor communities, providing healthy produce to the low-income population. (Taylor)



Figure 2-4

Case Studies:

1- Fitzgerald and Union Parks, West Oakland, CA



Figure 3-1

The urban farm at Fitzgerald and Union Plaza Parks provides open space for recreating, urban agriculture programming for all ages, and organically grown fruits and vegetables for West Oakland, prioritizing low-income community members. This is a community-based intergenerational project in partnership with City of Oakland Department of Parks and Recreation.

The urban farm is currently prioritized to provide food for low-income and the homeless residents in the area. It is also being used as an open gathering space for community events, and providing opportunities to teach the local children and youth about farming and gardening.



Figure 3-2

The Community Market Farm operates year-round Tuesday through Saturday and City Slicker Farms staff manages the farm and works with community members and keeps the farm a safe place for everyone. It produces organic fruits and vegetables for the community through a weekly farm stand. (City)

2- Homeless Garden Project, Santa Cruz, CA



Figure 3-3

The Homeless People Project started in 1990 by the Citizens Committee for the Homeless, a non-profit in Santa Cruz. The main goal for this project has been to “provide sanctuary, refuge and meaningful work within the healing environment of the organic farm.” (Pogash)

The Homeless Garden Project is a job providing and training opportunity. It teaches its trainees basic farming skills that later on can be used as a strong experience for finding a job. It is designed to gather the community members, volunteers, students and homeless trainees through work and strengthen the community to “break down the profound sense of isolation, experienced by many homeless people.” They also provide the trainees with hot meals, grow organic fruit, vegetables and flowers to serve the homeless and low-income families of Santa Cruz. Educating students and groups that use the garden is among this project’s goals.

Site Study/Analysis:

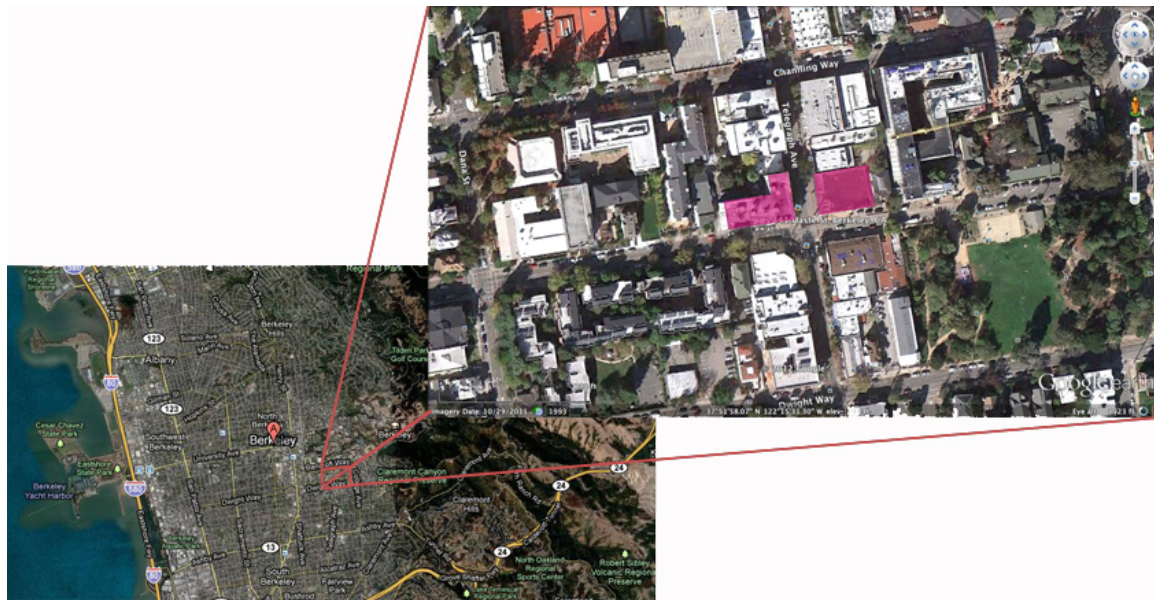


Figure 4-1

The proposed site for this project consists of two portions. The first portion is an empty lot, located on the eastern side of Telegraph Avenue on Haste Street and adjacent to The People's Park. Its size is about 9,500 sq. ft. The second portion of the site is an empty lot that was used in a mix-use setting. It consisted of a 39-unit apartment complex on Haste Street and Cafe Intermezzo, Raleigh's Bar and Grill, and Thai Noodle II on Telegraph Avenue. It was burned down in a fire in November of 2011. Structurally unsafe, the building was demolished. The only remaining

element of the structure is the façade of the café and two restaurants facing Telegraph Avenue. This includes the main entrances of the restaurants. Per zoning standards of the City of Berkeley, both parcels of the site are currently listed as commercial use.

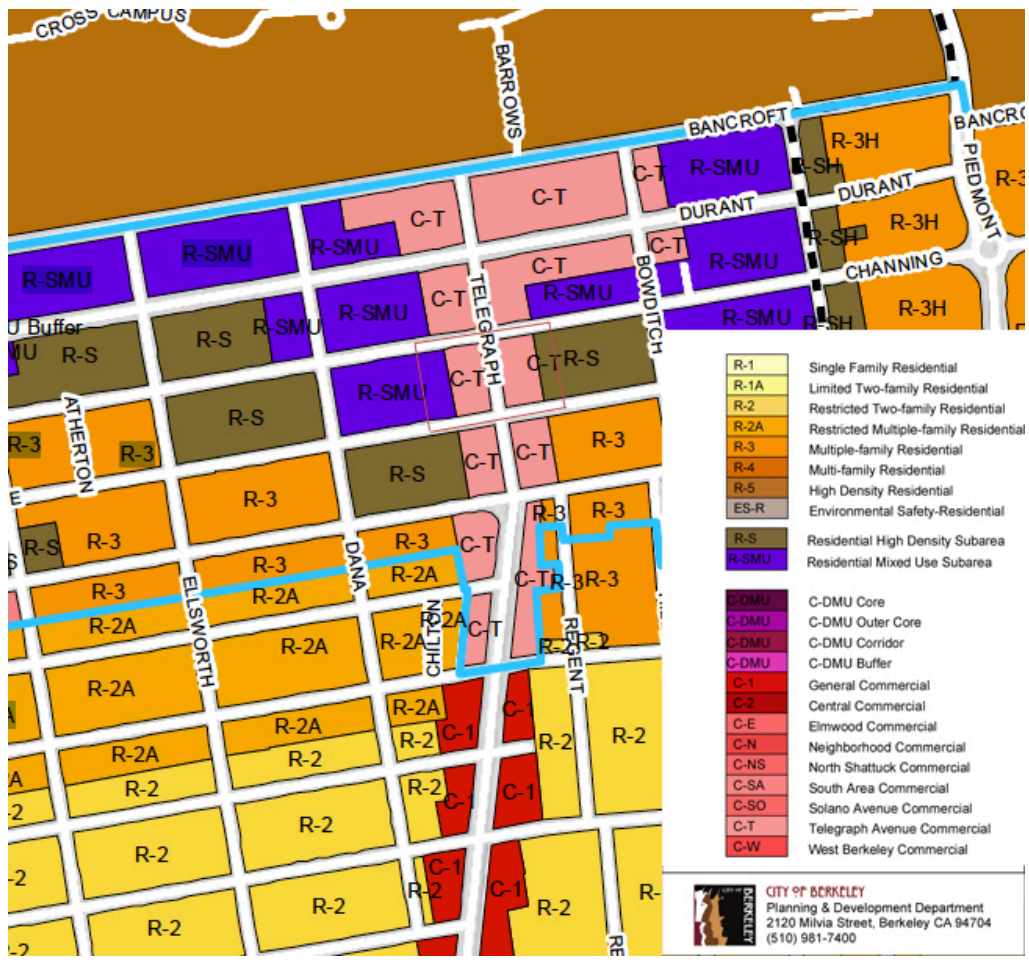


Figure 4-2

Existing Conditions:



Figure 4-3



Figure 4-4



Figure 4-5



Figure 4-6

Opportunities:

There are various factors that enhance and support the proposal of the design for this site. They provide developmental opportunities for exploration and constructive endeavors. The design will provide environmental opportunities by reducing the urban heat island effect, an increase in the temperature of the built areas compared to that of nearby rural areas, through creation of green space. It will provide benefit in a socio-economical way through creating jobs and providing the local food vendors and the community with locally grown produce. Moreover, it will create a socially active place for community members to gather and interact. Raising the environmental awareness and encouraging the practice of urban agriculture are crucial opportunities that could be successfully achieved. Creating a youth educational program will promote and teach hands-on skills leadership and responsibility, social competency and civic engagement. The health and nutritional factors, green beautification, access to fresh produce, recycling, composting and cultivation of organic produce opportunities are among the underlying points that will help in considering creativity points that embrace the various benefits for this project.

Constraints:

The main constraining factor for the project is safety concerns, regarding the location of the site. The site is located on a busy street corner, with high vehicular traffic, and moving between the farm and farmers' market can be a concern for the costumers and the farm staff.

Project Goals:

The main goals of this project fall under four main categories that are closely connected to each other. (Figure 4-2):

- 1) Educational
- 2) Environmental
- 3) Economical
- 4) Social

This project can be utilized for education purposes by teaching the youth, community members and volunteers hands-on skills that could be used as a valuable experience for finding jobs. It can teach the value of growing food locally. It also could be utilized for raising awareness regarding the environment, through the practice of sustainable farming techniques.

The environmental aspect of the project is tied to the educational factor. As mentioned above, raising awareness is a great method for educating

the community members, especially the youth. Moreover, converting the empty lots into green space will reduce the urban heat island effect. Local production of food and selling it to the consumer leaves a smaller footprint on the environment, due to the smaller distances that will be commuted for shipping. It means lower greenhouse gases being released, as a result of shipping. Having compost bins and cisterns on site will also benefit the environment. The practice of integrated pest management techniques will be a positive step toward preserving the environment and respecting the right of life for other creatures.

Economically, the growth of produce in a local setting will lower the cost and create jobs, which will bring more money and funds to the community. This will also help the needy people, especially the homeless, to become more independent and give them the ability to support themselves.

An urban farm next to a farmers' market will create a gathering space for socialization, where the local community comes together and celebrates often. This will additionally give the chance for homeless people to interact with the community in a different environment, depicting a new image of them in the society.

EDUCATIONAL



ENVIRONMENTAL



ECONOMICAL



SOCIAL

Figure 4-3

Design Strategy:

The proposed design for this project is a Charbagh garden, which is a Persian-Style Garden. Its design is simple and functional. This urban farm is going to be functional year-around, during the four seasons, thus the Charbagh design was chosen to represent the four seasons.

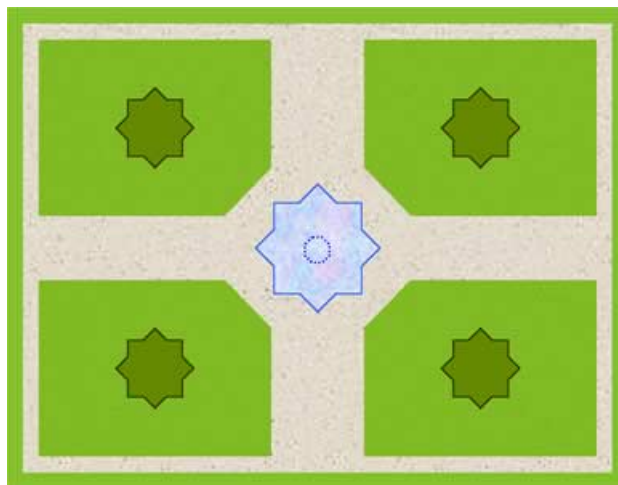


Figure 5-1

The site consists of two parts: the farm part and the farmers' market part. The farm part will be fenced off. The production body of the farm is made of planters, built from recycled non-toxic material. The main entrance of the farm will be on the east side, adjacent to Telegraph Avenue. This is where the remaining façade stands. The existing entrances on the façade will be gated and preserved, with the exception of the first

entrance on the far left, which will be used as a window. The immediate area after entering through the main entrance has been designed as a small gathering space for visitors before entering the farm. This area is separated from the farm by a fence with a gate in the middle. There are four rows of small trees in the middle of this area and two L-shaped seat walls on the northern and southern sides. Brick pavers will pave the gathering area.

The farm area consists of 16 x 4 ft. and 20 x 4 ft. planters. The planter area is surrounded by fruit trees, a traditional method in Persian Gardens. In addition to the front entrances, there will be a bigger entrance in the southwestern corner of the farm, on Haste Street. This entrance will be used for shipping produce and truck accessibility.

In the northwestern corner of the farm area, there is a small space that is designed for storage shed, a chicken coup, and cisterns to collect rainwater for irrigation, and compost bins.

The farmers' market section of the site has a simple Charbagh layout. The space has been divided into four sections by a cross-shaped path that is paved with brick pavers. There is a lemon tree in the middle of each section with four sets of tables underneath it. A planter in the middle of the

cross path marks the focal point. A wooden, L-shaped shade/shelter structure will be constructed on the north and east sides of the area. The structure provides protection from sun and rain for the vendors. Produce, hot food, art, jewelry and other goods will be sold under the structure.

The farmers' market area will have a green wall on the west side, adjacent to Telegraph Avenue. The shape of the green wall mimics that of the existing façade at the farm area. The southern side, adjacent to Haste Street, will be separated from the sidewalk, using a short hedge. The unpaved areas of the farmers' market are covered by decomposed granite.

To make connection between the two sections, the middle of Telegraph Avenue will also be paved using brick pavers.

Graphics:

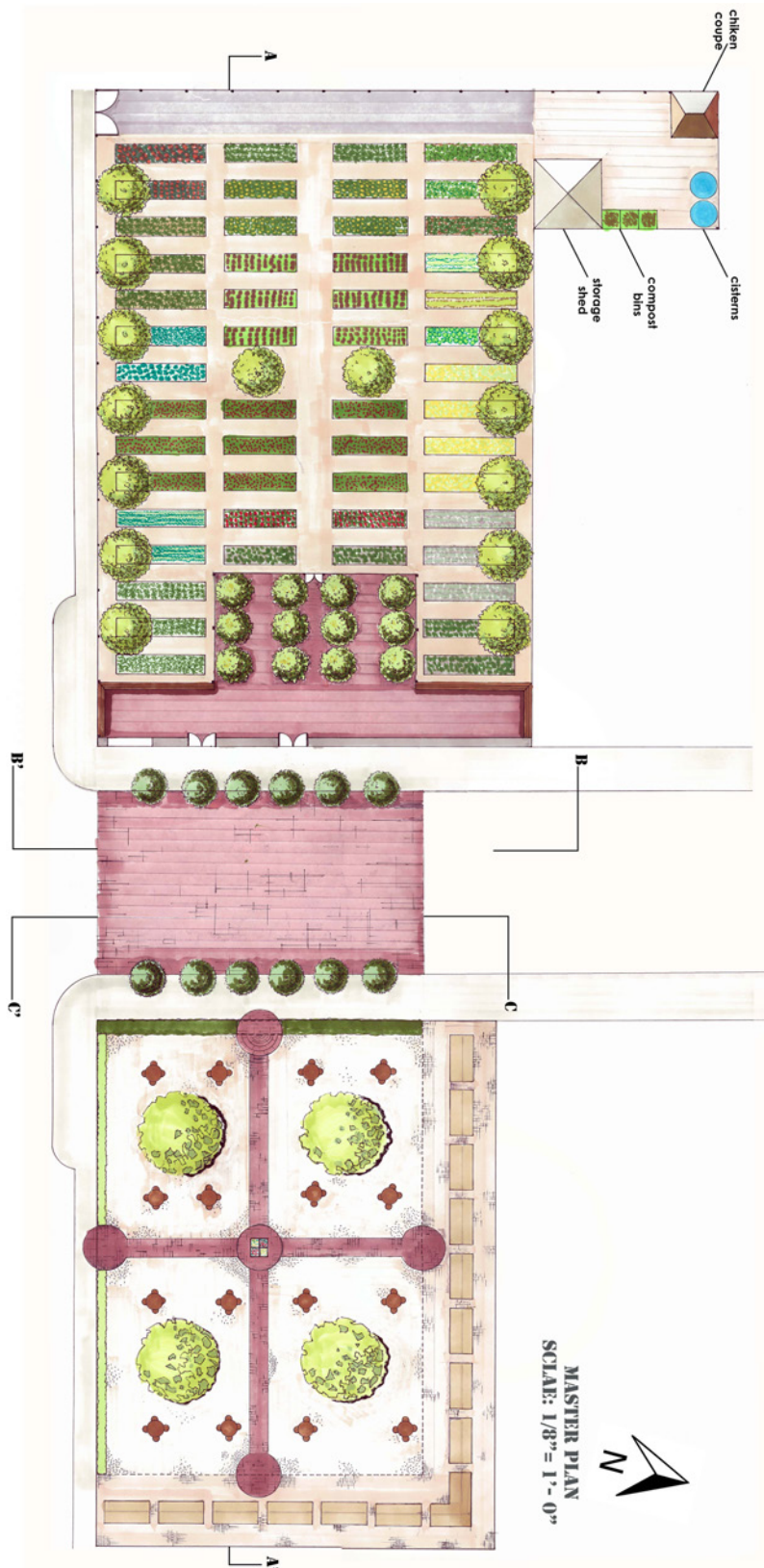


Figure 5-2



Figure 5-3



SECTION-ELEVATION B-B'
SCALE: 1/8"=1' - 0"

Figure 5-4



SECTION ELEVATION C-C'
SCALE = 1/8" = 1' - 0"

Figure 5-5

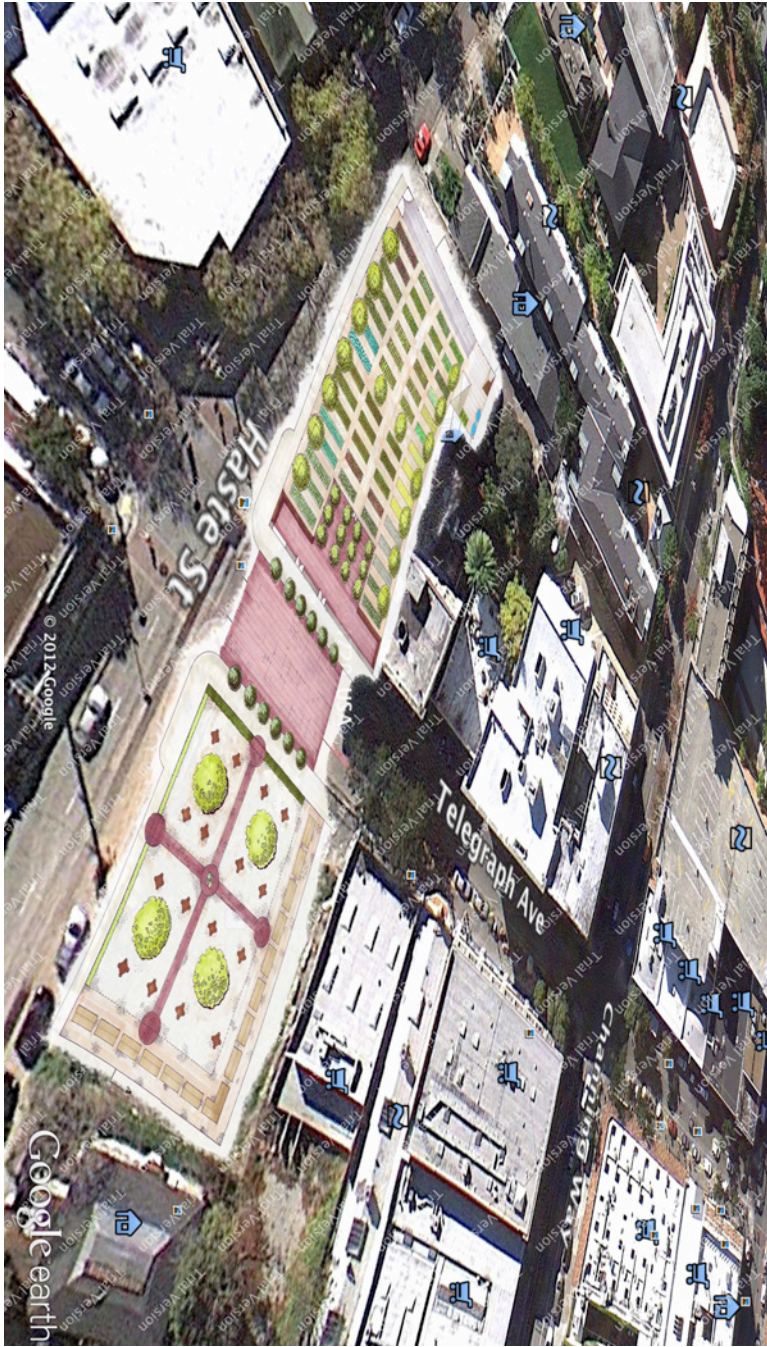


Figure 5-6

Plants List:



Lettuce



Broccoli



Cucumber



Tomatoes



Carrots



Beets



Onions



Squash



Radish



Corn



Peppers



Eggplant



Herbs



Bartlett Pears



Apples



Lapins Cherry



Olives



Kim Elberta Peach



Lemon



Fuyu Persimmon

Conclusion:

This project develops a space that provides a productive outdoor space and a social hub for the community. The design creates a multifunctional production, gathering, and educational space for increasing the economical power of the community, as well as connecting the different layers of the community. Moreover, the goal of the design is to develop an environment where individuals come together in a setting and learn skills that can be utilized for career building purposes. This will be an environment that supports educational, economical, social, and environmental enrichment for the improvement of the existing community and building a better community for the future generations. This urban farm can be a place for growth, support, and a model that can be used in many other communities all over the US.

References:

- Carpenter, Novella, and Willow Rosenthal. *The Essential Urban Farmer*. New York: Penguin, 2012. Print.
- Carpenter, Novella. *Farm City: The Education of an Urban Farmer*. New York: Penguin, 2009. Print.
- "City Slicker Farms." *Fitzgerald and Union Plaza Parks*. Web. 09 June 2012. <<http://www.cityslickerfarms.org/fitzgerald-and-union-plaza-parks>>.
- Cockrall-King, Jennifer. *Food and the City: Urban Agriculture and the New Food Revolution*. Amherst, NY: Prometheus, 2012. Print.
- Francis, Charles A. *Organic Farming: The Ecological System*. Madison, WI: American Society of Agronomy, 2009. Print.
- Lautenschlager, L., Smith, C. 2007. Beliefs, knowledge, and values held by inner city youth about gardening, nutrition, and cooking. *Agriculture and Human Values*, 24(2), 245-258.
- Naimark, Susan. *A Handbook of Community Gardening*. Boston Urban Gardeners INC. New York, NY. 1982
- Ober Allen, J., Alaimo, K., Elam, D., and Perry, E. (2008) Growing vegetables and values: Benefits of neighborhood-based community gardens for youth development and nutrition. *Journal of Hunger & Environmental Nutrition*, 3(4), 418-439
- Pogash, Carol. "A Shelter Is Built Green, To Heal Inside and Out." *The New York Times*. The New York Times, 28 Jan. 2008. Web. 8 Apr. 2012. <<http://www.nytimes.com/2008/01/28/us/28shelter.html>>.
- Rich, Sarah. *Urban Farms*. New York: Abrams, 2012. Print.
- Smit, J., A. Ratta, and J. Nasr. *Urban agriculture: food, jobs, and sustainable cities*. United Nations Development Program.

Taylor, Lisa. *Your Farm in the City: An Urban-dweller's Guide to Growing Food and Raising Animals*. New York: Black Dog & Leventhal, 2011. Print.

Urban Sprouts. (2009). About us. *Neighborhood Parks Council, San Francisco, CA*. Retrieved May 20, 2012, from http://www.urbansprouts.org/?page_id=2

"What Is Urban Agriculture?" *The RUAF Foundation- Resource Centres on Urban Agriculture and Food Security*. Resource Centres on Urban Agriculture and Food Security. Web. 05 May 2012. <http://www.ruaf.org/>

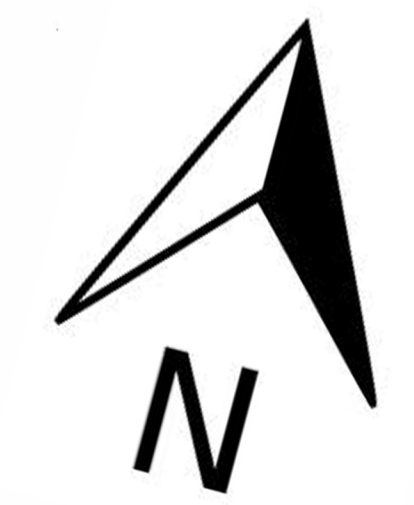
chicken
coupe

cisterns

compost
bins

storage
shed

MASTER PLAN
SCALE: 1/8" = 1'-0"



A

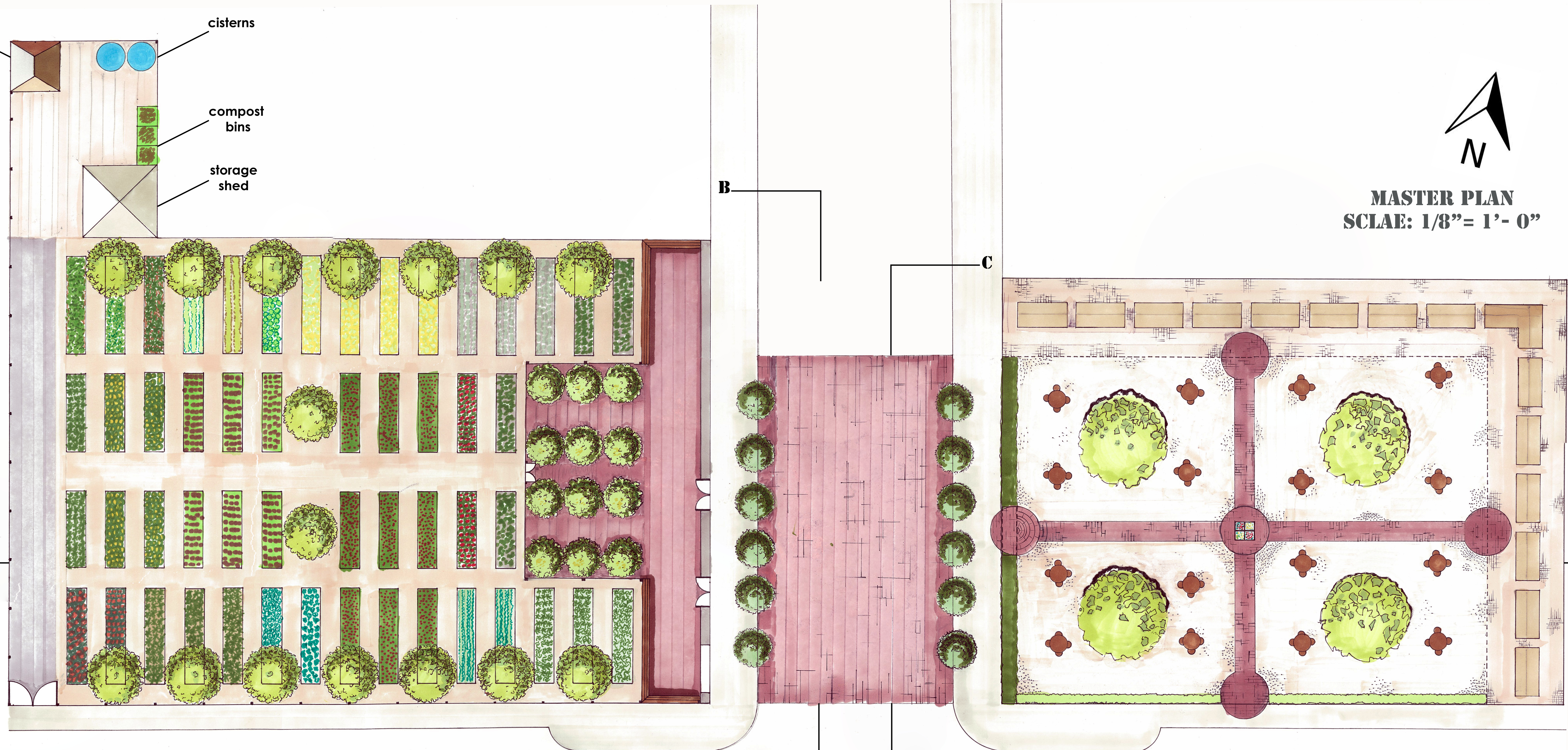
B

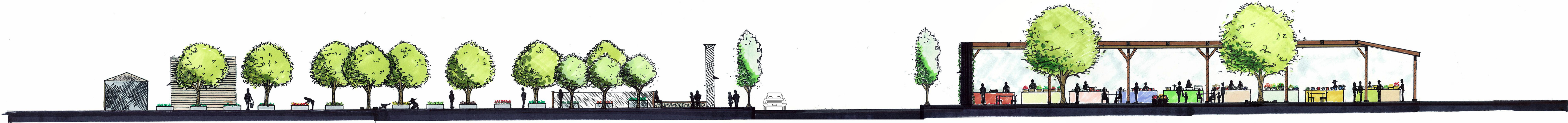
C

A'

B'

C'





SECTION-ELEVATION A-A'
SCALE: 1/8" = 1' - 0"



SECTION-ELEVATION B-B'

SCALE: 1/8"=1' - 0"



SECTION ELEVATION C-C'
SCALE = 1/8" = 1' - 0"