

Modular Resilience for the Creative Class

The Living and Breathing Evolution of Silicon Valley's Business Parks



Johann Holvick-Thomas

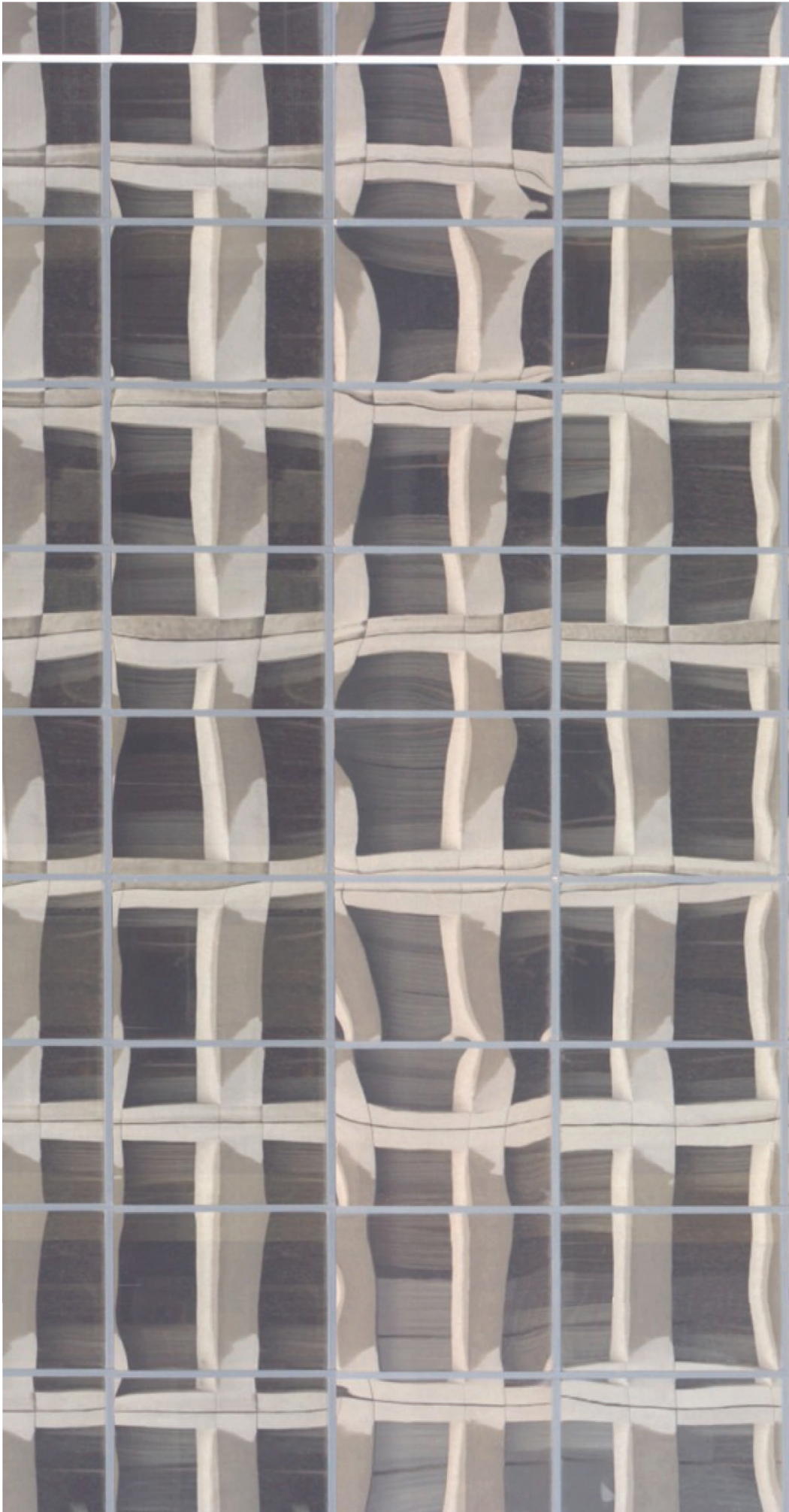


JOHANN
HOLVICK-THOMAS

U C D A V I S
LANDSCAPE ARCHITECTURE

SENIOR
THESIS

JUNE 2013



DEDICATED TO

MY LOVING MOM
DEBRA HOLVICK

AND

MY GRANDFATHER
CARL HOLVICK

Modular Resilience for the Creative Class

The Living and Breathing Evolution of Silicon Valley's Business Parks

Johann Holvick-Thomas

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Presented to the faculty of the Landscape Architecture Department of the
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ACKNOWLEDGEMENTS

First and foremost I want to thank my family who supported me throughout my college career and inspired me to push what is possible in both my own life and the built environment. I would have never found a career so suited to my personality had my mother and father not encouraged me to take my time to search my soul and choose a passion rather than a job. My grandfather pioneered business parks for his generation and I thank him for building the foundation for mine. Throughout this project, people who worked beside him endowed me with his philosophy that will stick with me for the rest of my life—success is measured in the honesty of one's character and not the mirage of wealth.

I want to thank all my professors here at the University of California Davis for showing me the profession of landscape architecture and opening their hearts to personally mentor the next generation of designers. Each professor has a unique perspective and I am going to miss attempting to exceed each of his or her expectations. College has never been about grades to me, but proving to my dedication to my classmates and professors. Even though critiques are inevitable, it is only when you realize what more you could've done after a project's completion that you are learning.

Finally, I thank my friends and classmates for aiding me in the pursuit of my passion. Throughout my five years at the University of California Davis, I have never met such a tight knit and supportive group of individuals in my life. They picked me up when I was down and dared me to think bigger every time I achieved a personal goal. I would also like to add a personal thank you to my dear friends Micheline Chagniot and Scott Superko.

To all that I've meet and will meet in the future, you are unique and there is always more I can learn from you no matter what walk of life you come from. Thank you!

ABSTRACT



The average worker spends more time at work than at home, but more personality is given to residential landscapes in comparison to their business counterparts. Why are corporate landscapes so architecturally similar and what does that say about our values?

Companies like Google are attempting to dismantle the stereotypical company hierarchy and transformed the interior of their offices to express a playful work environment. Sustainable facades like Apple's new headquarters try using bioswales, solar panels and walkable connections to pristine ecological reserves to market their headquarters as in tune with the natural environment. Twitter tries to promote social and economic equality by working to revitalize Market Street in San Francisco through locating its offices in lower-income neighborhoods. The strategy behind these intensive redesigns is to attract the best engineers and designers coming straight out of Ivy League colleges dubbed "the creative class."

Yet with all of these social, environmental and economic revelations in Silicon Valley's technological companies, the general business landscape still mostly asphalt parking lots with sparse vegetation. The truth is that the average Silicon Valley company doesn't have the capital to own nor create a revolutionary new corporate campus.

Through my project, I hope to bring the same landscape strategies used by corporate powerhouses to existing business parks and the everyday employee. Every worker and small business manager should be able to personalize their outdoor environment in the same manner as their office cubical. I believe that the evolution of corporate cultures demands a redesign of the built environment. Yet the history of business parks show that the only consistency throughout Silicon Valley is the inevitability of change.

Therefore modularization of outdoor spaces that allow for the office environment to adapt to whatever cultural fashion becomes popular can provide the foundation future generations to display their personality to the world. I will use my mother's business park in Palo Alto as a case study to prove that modular designs can solve a variety of issues inside the corporate realm as well as the surrounding landscape.



01

SILICON VALLEY LANDSCAPE HISTORY

Spanish missionaries dubbed the area of Santa Clara as “The Valley of Heart’s Delight” for its agricultural growing conditions. Perfect weather, a nutrient rich soil and meadows of flowers soon attracted farmers plant orchards throughout the area. The land use stayed the same until 1891 when Leland Stanford bought 8,650 acres of orchards in the foothills and created one of the world’s most prestigious universities—Stanford (Goble, 2).

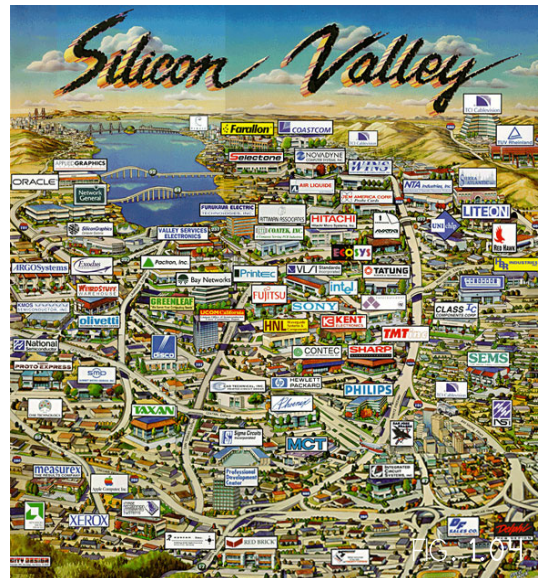


Although technologically inferior to its east coast counterpart, Stanford University soon captured the world’s recognition with its breakthroughs in hydro-electric dam, radio communications, and long-distance power transmission. These inventions connected Stanford to its neighbor San Francisco by transporting communications and electricity more efficiently than anywhere else in the world. As Stanford became more affluent, orchards were sold off to real estate developers or converted to what is now Stanford Campus.



Electrical engineering sparked in Silicon Valley during World War II and Stanford University developed an Industrial Park to contain its intellectual elite and top-secret projects. The number of military engineers working on microwave technology multiplied from 700 to 7,000 within a few short years. These projects were top secret and hidden under the cloak of small technological ventures designed for fast growth within Santa Clara County. Soon, civilian engineers began expanding the technological innovations, creating radar and the audio oscillator, both still in use today. In 1956, the semiconductor was invented and the age of computers was born, with Santa Clara and San Mateo Counties as its new home. The term "Silicon Valley" was finally coined during the 1960's (Globe 1-3).

Silicon Valley is located in the southern region of the San Francisco Bay Area in Northern California. The nickname for the high-tech businesses within the area stems from the silicon chip industry that sparked the small start up craze fueled by venture capitalist culture in Santa Clara Valley. Today, Silicon Valley has expanded from Santa Clara County North to San Mateo County, the County of San Francisco and parts of Marin County. Over the past 70 years researchers have tried to pin point whether culture or technology caused 1/3 of all venture capital investments throughout the world to be isolated in Silicon Valley. However, it is common knowledge that "an entrepreneur can move from initial concept to incorporation, financing and growth more rapidly in Silicon Valley than anywhere else in the world" (Saxenian, 9).



DEFINING A BUSINESS PARK

The area of land in which many office buildings are grouped together is defined as a business park. Usually consisting of sparse perimeter vegetation, parking lots and grand architectural buildings, business parks usually sprawl after an economic boom.



FIG. 1.05



FIG. 1.06

Business parks are centered adjacent to highways where property values are low and vehicular circulation is fast and easy. Some offices may be centered around public transit in highly urban environments; however these are more commonly other building types that were hard to lease and easy to modify.

Building offices typically use tilt up construction (pioneered by my grandfather) to minimize manufacture costs. Parking lots surround the structure due to their low cost of construction and minimal maintenance regime. A skinny perimeter of grass creates an inexpensive area of vegetation primarily for people passing by the property.



FIG. 1.07

RISE OF THE CREATIVE CLASS



FIG. 1.08



FIG. 1.09

The organizational or business culture of Silicon Valley broke the traditional “suit and tie” corporate structure of the 1950s. The collective behaviors and assumptions that evolved from having a family picture on one’s desk grew into tearing down cubical walls and allowing employees to roller-skate around the office. Creative and individual expression gave new meaning to how the modern employee felt about work.

Uniformity in the office place that was once essential to business productivity is now outdated by businesses like Facebook or Google for hindering the next big change that will entice financial investment. Today, these corporate cultures are used as a marketing technique to provide a simple to understand vision of the company to clients, stakeholders and consumers throughout the modern world (Delbecq and Weiss, 40).



FIG. 1.1

02

INTRODUCTION TO STANDARD BUSINESS PARK



FIG. 2.1

The expanding integrated circuit manufacturing and the new-found fashion of driving to work during the 1960's and 1970's pushed developers to create more offices, research and development laboratories, manufacturing facilities and warehouses within Silicon Valley. With much of the new technology still untested, business park designs were very conservative and for good reason. New offices were constructed away from residential neighborhoods to safeguard home values from the unpredictable global economy.

Architects built low density buildings regulated by a industry standard floor-to-area ratio (FAR) of .35. The idea behind the FAR was to provide a standard template that could be scaled up or down depending on the success of the tenant. Architectural features were uniform and unaffiliated with the occupying tenant to easily transition a new company into the Business Park. To fill the vast amount of open space, large lawns and water features buffered the roadways from the oversized parking lots and short buildings. Land ownership, green grass, and elaborate fountains were symbols of power that attracted new employees who were comfortable with the campus environment after living in a University (Weinstein, 1).

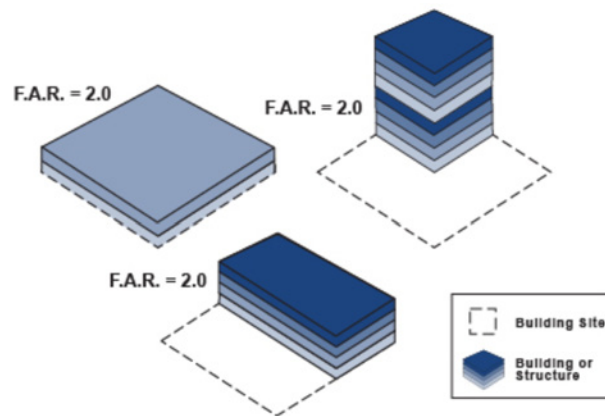


FIG. 2.2

Developers and real estate companies soon realized that their property values would drastically increase based on calculated factors. Proximity to supply manufactures, transit stations, universities, affordable housing, trained workforce, and even professional sports teams are all valuable to the business park market. Its distance to these variables using GIS information can value any particular site. Public systems like highway traffic, multiple broadband systems, reliable electricity, pro business governance, energy saving incentives, and even the city's reputation all drove up business park rent (Livingston, 1). Yet, the main driving force behind real estate values was not in the control of the business park owners, but the global and national economy (Weinstein, 1).



FIG. 2.3

TROUBLE WITH STRICT BUSINESS STANDARDS

Architect and contractor Carl Holvick, the author's grandfather, would rave about investing in Silicon Valley because there seemed no end in sight to the area's prosperity. Developers, real estate companies, and high-tech companies had never seen a "bubble" so resilient to the oil crises of the 1970s, or the stock crisis of 1987. However, the exponential growth of Silicon Valley would come to a screeching halt in 2000 when the "dot com" bubble burst.

The Internet had its first economic collapse and shareholders pulled their investments nationally, leaving a number of companies out of business. Commercial vacancies went from 2% to 20% within three years in Silicon Valley. Real estate companies that were charging almost \$9 per square foot dropped their rates to \$3. The lack of adjustable infrastructure led the properties to remain vacant and hindered investors from repurposing the business parks.

COMMERCIAL VACANCY

Annual Rate of Commercial Vacancy

Santa Clara County

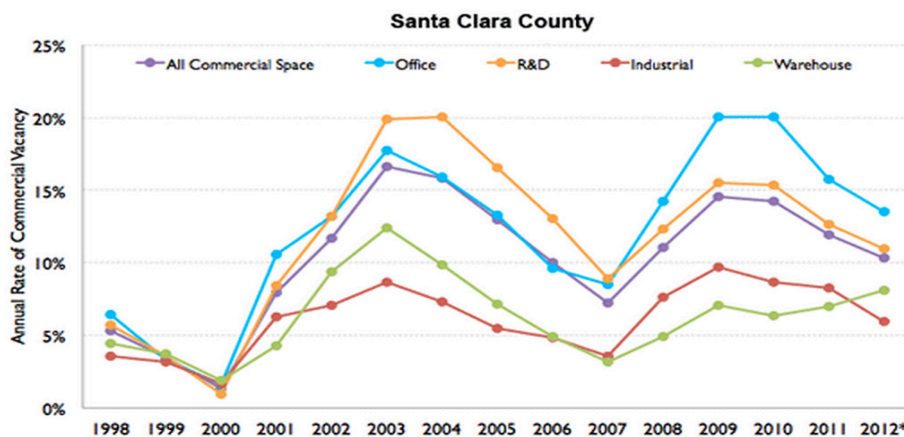


FIG.2.4

Recovery was then led by subprime mortgages. Vacancy rates in Silicon Valley were cut in half from 20% to 10%. Yet the asking rent of commercial buildings only rose 50 per square foot. Once the foreclosure rates on commercial properties increased in 2007, and the public became aware of the housing crisis, both vacancy rates and rent returned to their original dot com numbers in 2003 (Colliers International, 2012). Today, vacancy rates are falling and asking rents are staying level, but real estate companies and developers are more aware of the fluctuations created by the global economy.

URBAN DEVELOPMENT PROBLEMS

Silicon Valley Regional Planning organization released a research paper in 2008 outlining the current problems facing residences and employees alike. Currently Silicon Valley has more jobs than housing units and, within the next fifteen years, middle-income individuals will be able to afford to live where they work. Rental and ownership rates are skyrocketing along with the need for public transportation. Areas without public transportation attract a lower income demographic and consequently are exposed to toxic dumpsites and little access to open space.



FIG. 2.5

The roadway infrastructure of the 1960's and 1970's were never meant to handle modern traffic and negatively affects both the economy and the environment. Longer commute times will increase the demand for public transit. If public transportation has no room to expand, then citizens are left deciding between an expensive bus ride and wasting time stuck in traffic. Either decision will hurt every person's pocket book and increase greenhouse gas emissions. Silicon Valley regional planning and public administration can't solve these problems created by private enterprises. It necessitates a civil responsibility between both public and private entities to "accommodate growth in a sustainable and equitable manner while maintaining the uniqueness and diversity within neighborhoods and the greater bay area" (Kim, 6).

03

FACEBOOK



FIG. 3.01

Facebook consolidated its ten different offices in the hub of downtown Palo Alto into one large headquarters located in Stanford's Research park in East Menlo Park. Design strategy lead for Facebook Aaron Sittig had two main goals: to build a space "as quickly and cheaply as possible." A scaled model was made to allow CEO Mike Zuckerberg to adjust the layout of his buildings and customize the landscape and architecture.

The building and landscape received silver rating from the LEED program (Bierig, 1). Rectangular walls were cheap to put up and can be easily manipulated. The buildings all have green roofs with lookouts over the Baylands. The main office district acts as a perimeter and encloses a campus of playful grass and pathway designs.



FIG. 3.02



FIG. 3.03

The open floor plans and densely arranged workstations helps foster communication and collaboration amongst engineers, staff and designers alike. The space was left undecorated for employees to implant their design preferences into their workspace. Pedestrians and bicyclists share the main road while kiosks provide an urban atmosphere.

TWITTER

Twitter recently finished construction on its Mid-Market district headquarters in San Francisco. After the city gave tax incentives for new companies located in economic struggling neighborhoods. Twitter took advantage of the building's transportation network including BART, MUNI bus, and historic cable car



Twitter monopolized the real estate with 400,000 square feet of office space and 80,000 square feet of retail space. A green roof on top of the building provides ample recreation space and patio seating. The inside office is comprised of various old school arcade games and eccentric furniture.

Twitter blocked Stevenson Street from vehicular traffic to create a pedestrian promenade full of kiosks and market stands. Again, the main incentive for the physical design and construction was to do it fast and cheap (Hoge, 1).



APPLE



FIG. 3.07

Apple's former CEO Steve Jobs designed a 175-acre campus described as an "earthly paradise." The site consists of photovoltaic panels on the roof and is LEED Platinum certified. The inner ring is strictly for employees while the outside ring is open to the public and creates a crowded park-like aesthetic.

Similar to his technological innovations, Jobs sought to create a truly iconic business park with a retro-style aesthetic. In fact, the site is so retro that it pays homage to the apricot orchards that had existed during the early 1800's.

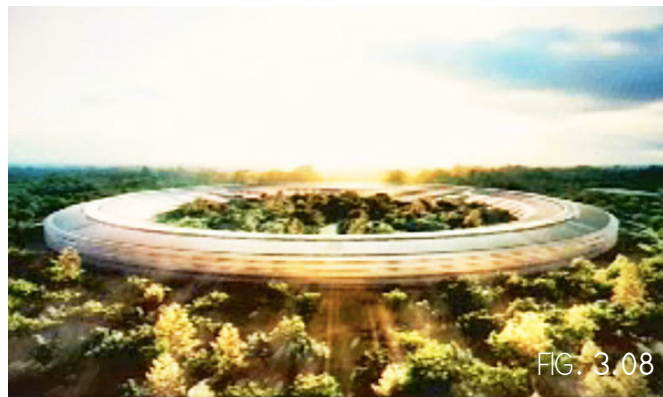


FIG. 3.08



FIG. 3.09

Native grasses and large oak trees surround the site creating a foothill environment inviting native wildlife to flourish. Apple doesn't seek to create a completely urban aesthetic nor a fast and cheap office structure.

THE CONSISTANCY OF CHANGE

When analyzing what trend is most likely to become the next wave of the future, I looked at the top 10 companies most likely to succeed in Silicon Valley by Forbes Magazine. I thought that if there were one particular trend that was more likely to occur, then that would obviously be the next evolution of business parks.

However, I soon discovered that every company was more or less following the same cookie cutter guidelines of the 1950's. I then realized that the same strictness that plagued the sprawling business parks after the silicon chip would eventually make all of these buildings absolute.

The technological industry has such a high rate of turnover that is shorter than the building's lifespan. Therefore wouldn't it make more sense to build business parks that are adaptable as the 21st century's new work force?

Also every large-scale investment that was made was innately permanent and dictated by the CEO or board of directors. To me, this appeared contrary to the emerging business culture where each individual employee could personalize his or her interior space. Why should the outdoor space be any different? I think a celebration of personal identities could be attractive to the new creative class.

If a fiscally conservative company were to bet on which one of the elements would most likely be valuable after the company has outgrown its walls, they wouldn't place their money on any of these. The only thing that I believe is consistent throughout Silicon Valley's history is change.

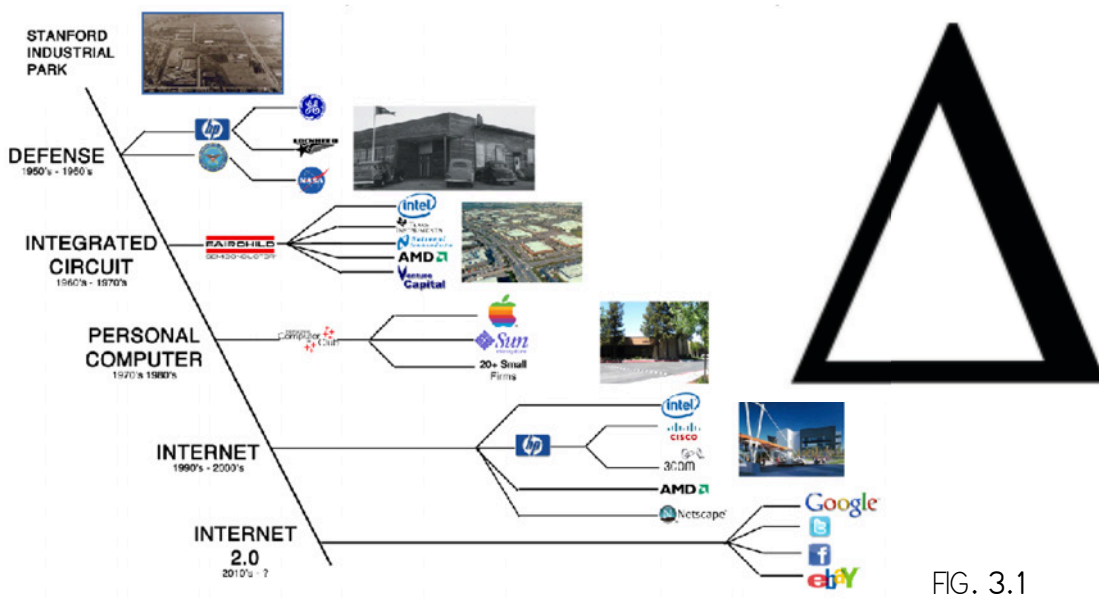


FIG. 3.1

PLAYERS OF THE GAME

The business manager or CEO has the legal right to alter any decisions the company makes in regards to its budget and is therefore the most powerful. She/he is budget and efficiency driven in order to increase profit and entice outside investment. The CEO also controls the size of the company and has the freedom to expand or contract the company as they might please. However, business managers are often stuck in long-term leases and inflexible leasing space can quickly use up capital in an economic downturn.

The property manager is the second most powerful player in Business Park design. In most cases, a real estate company owns the land in which the tenant is building on. Property Managers ensure the building is kept up to code and daily maintenance is completed in a timely and efficient manner. He/She also collects rent on a monthly basis and finances utilities. However, their job falls prey to ever changing zoning regulations mandated by the city. Temporary structures tend to have more lenient regulations due to their short-term life cycle.

Contractors who actually build the business park can often give the CEO's and property manager's insight into the cost and quality of materials. It is his/her responsibility to express their knowledge of construction and long-term maintenance to their client and advise them to the highest quality product for the lowest price. They often construct rectangular structures, drought tolerant plants, and consolidate expensive materials to logical focal points.

The employees are typically in charge of the interior design of the building and have little say on the exterior aesthetic. Cubicles and offices are decorated with photos of family, clever sayings and personalized furniture. Although the majority of business park users are employees eating lunch or commuting to their car. More liberal freedom of expression in the work place can be further exemplified in the outdoor environment without permanently altering the site in case the lease is terminated.



FIG. 4.01

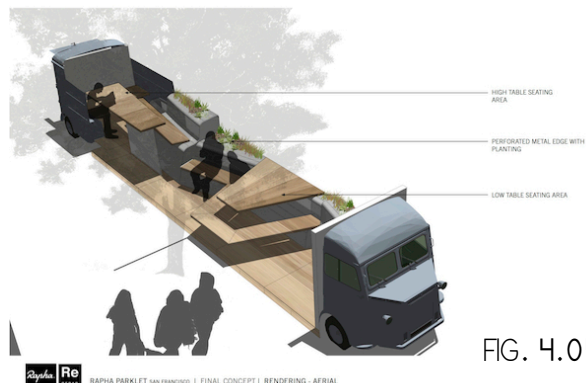
PARKLET INTO THE PARKING LOT

Parklets have been a recent trend throughout the past decade and have been cheap to produce, easily manipulated and interchangeable. I think these elements would be perfect for expanding the office into the adjacent parking lot without a huge investment cost. Small businesses and start-ups fluctuate dramatically. Parklets can expand the floor space of an office without breaking zoning codes because they're temporary in nature.



I plan on making these parklets modular by adding magnetic strips on the side and wheels on the bottom. With this format employees will be able to slide, stack, swivel, rotate and relocate their flooring to whatever specifications they need. Since parklets are in rectangular in nature they can create long walls, inner courtyards, and isolated pods connected by a hallway.

Adjustable furniture will be placed on the platform to create any interior space an employee desires. Chairs, desks, bike racks, benches, planters, garden beds or lawn can easily be placed on top in any configuration one might imagine. Electrical lines can be hidden underneath the parklets to provide electricity that's vital for the modern worker to be productive.



STORAGE CONTAINER ROOF

Outdated storage containers have been used as structural modules throughout the “sustainable fashion.” I plan on using the shipping containers as roofs to provide a roof over the head of the parklets. The Walls will be gutted out and the top and bottom trim will be intact in order to attach magnetized walls out of different materials.

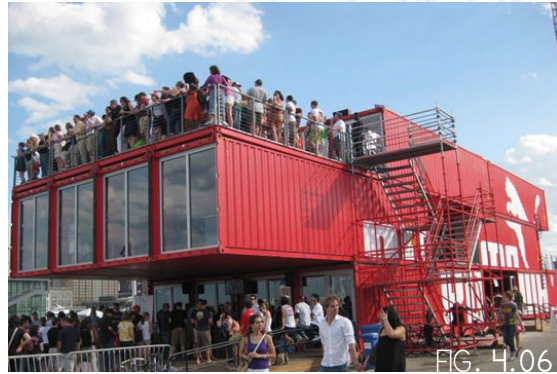


FIG. 4.06

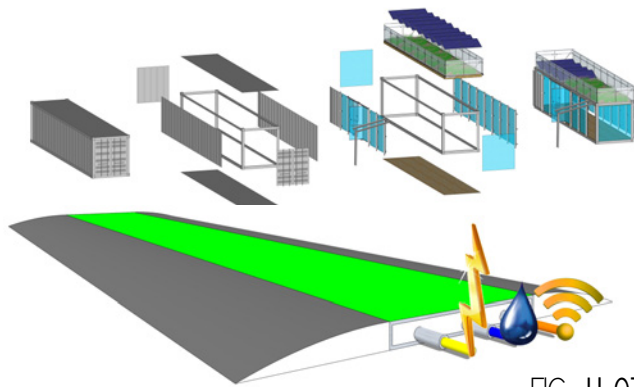


FIG. 4.07

Employees can purchase different walls that can act as draw bridges to connect adjacent pods, glass panels, photovoltaic cells, stainless steel aluminum, wood paneling, or whatever else the creative class can come up with. By having all the parts interchangeable, employees will be able to customize their home outside of home exactly to their unique specifications. Electricity, water and Internet will stem out of the main building concealed in a speed bump.

With a contractor’s help, these shipping containers can be stacked on top of one another to create multi-story structures. The scale of which these modules comprised of parklets and shipping containers is infinite. The brilliance of this design is that there is no limit to what can be built and the employees are in charge of what they need in order to create a productive work environment. The only limit is the user’s own imagination and if a recession hits, a flat bed truck can pick up the whole office and relocate it to a less expensive location.

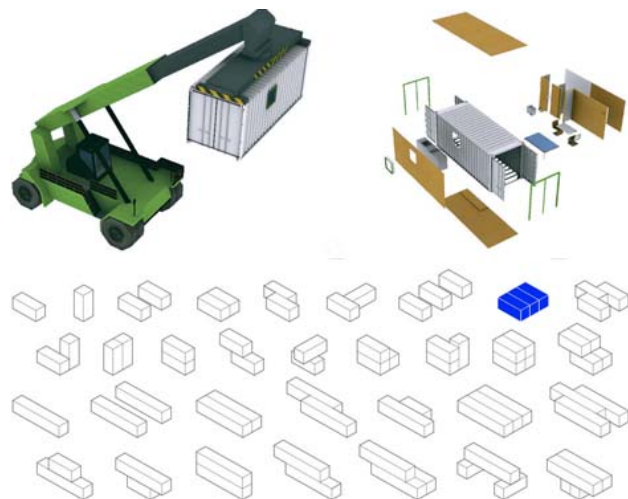


FIG. 4.08

POSSIBLE COMBINATIONS



FIG. 4.09

An outdoor lounge can be created on the perimeter of the building using parkiets. Glass panels originally used for the storage containers act as desks and display boards. A variety of surface materials could be used such as wood, trex decking, or rubberized turf for a play structure.

A small start up can shoot out of a parking lot by adding three storage containers onto the relocated outdoor lounge. One storage container frame acts as a trellis gateway onto the half court basketball/soccer court. Solar panel modules attach onto the roof and provide electricity for the office. The white speed bump provides back up electricity, water and Internet for the employees.



FIG. 4.1



FIG. 4.11

Stacking more storage containers onto can create a small business building once the start up receives outside investment. Storage containers can be stacked on each other or side-by-side to create a larger building footprint. Solar panels efforts are exponentially increased in order to support the massive square footage. The half court field is now a full court and the planters were converted to green walls to protect employees from the flying balls.

Finally the employees decided to reconfigure their small business building into a more inclusive shape. The empty frame trellis that acted as a gateway to the small start up now bridges the two mega-structures. Employees wanted to work on balconies and most of the second story storage containers were relocated to the first floor while additional parkiets were added onto the roof

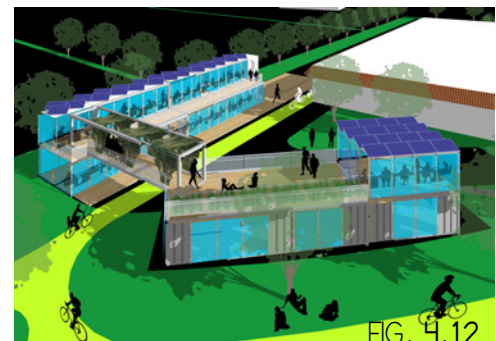


FIG. 4.12

SITE ANALYSIS

2225 East Bayshore Road is located in-between Palo Alto and East Palo Alto. The politics between the two cities has a long-standing feud between the high and low-income cities. With recent improvements happening on the Southwest side of highway 101, I hope to connect the two cities through pedestrian pathways in order to bridge the divide between the two.



FIG. 4.13

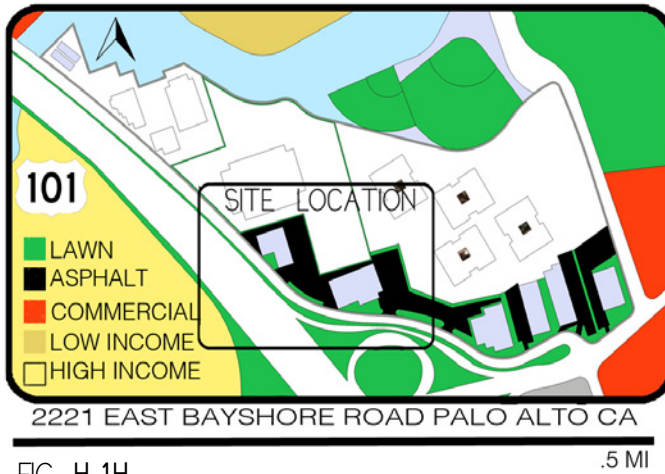


FIG. 4.14

The site includes three office buildings with unique architecture and outdoor spaces. However, lack of aesthetic features and local crime prevent employees from taking advantage of their outdoor space. There is an average 40% vacancy of parking spaces and I hope to take advantage of that open space.

When the tenants were polled on what element they would like to be added to their outdoor space most, there was a variety of requests. Through my modular design I will attempt to show how each and every one of those uses can be added to the site using a combination of parklets and storage containers.



FIG. 4.15

PHASING

- Phase 6
Customize layout into more desirable location
- Phase 5
Add more modules to build small business
- Phase 4
Add storage roofs for small start up
- Phase 3
Outdoor Lounge created with parklets
- Phase 2
Install native retention ponds and swales
- Phase 1
Add safe bike paths through the parking lot and way from fast traffic and bus stops
Grade parking lot with curb cuts to flow into vegetated areas

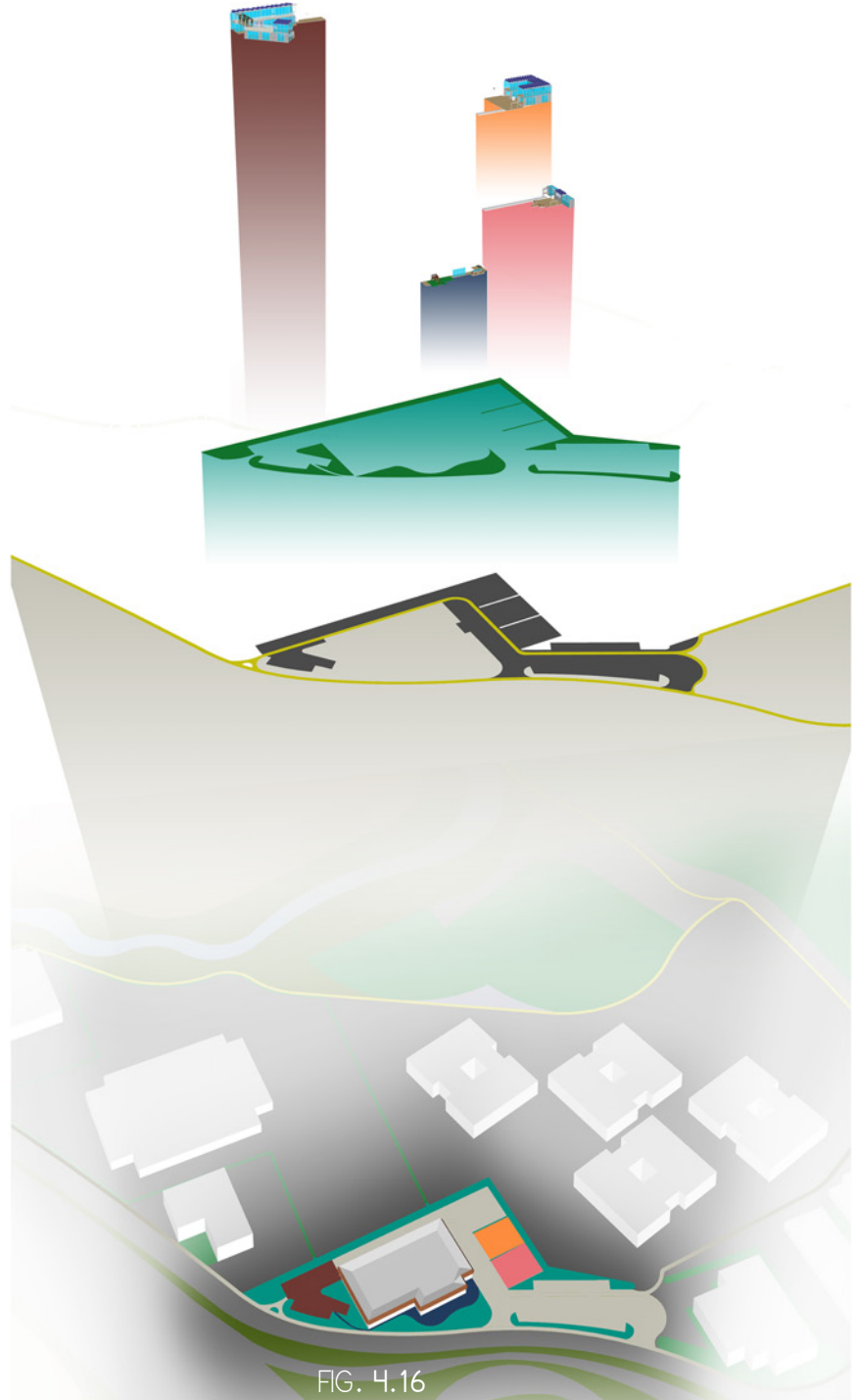


FIG. 4.16

POWER TO THE EMPLOYEES



Since the business park elements are modular, employees don't have to be expert model makers to graphically express what their ideal workspace would be like. Design contests or collaborative meetings could be a great way to increase efficiency and market the small businesses creativity to the outside world



Magnetic parklets on wheels allow employees to mix and match different pieces together to customize their outdoor space on a daily basis. The parklets also work as a dolly system to move heavy furniture.

MOVING IS A BREEZE



FIG. 4.19

Forklifts can easily assemble and disassemble the storage containers with ease. This allows for easily rearranging the office, quickly moving an office to a different location, or loading storage containers onto a flat bed truck for traveling longer distances.



FIG. 4.2

Flat truck beds are capable of transporting the storage containers across the state or country. Machinery is already configured to move these standard dimensions. Employees might want to configure their presentations at their headquarters and then transport it to a trade show or simply take a vacation and move somewhere with a better view.



FIG. 4.21

ALTERNATIVE USES

In the event of an economic collapse or depression, the storage containers and parklets can easily be sold for a variety of low-cost purposes.

If more workers choose to work at home to cut down on expenses, an outdoor study would a perfect get away from the home.



FIG. 4.22

Storage containers could be transformed into an inexpensive residential living space without the connotation of a trailer park home.

Finally, large corporations could buy out the module units and construct new low cost service restaurants such as Starbucks or Dutch Brothers Coffee.



FIG. 4.23



FIG. 4.24

BIBLIOGRAPHY

1)

Bierig, Aleksandr. "Facebook's Frugal Home." *Facebook Headquarters*. HQ, 2013. Web. 19 Mar. 2013.

2)

Blank, Steve. "The Secret History of Silicon Valley Part V." *Steve Blank*. Steve Blank, 20 Apr. 2009. Web. 19 Mar. 2013.

3)

Colliers International- San Jose. "Commercial Space." *Silicon Valley Index*. Joint Venture Silicon Valley & Silicon Valley Community Foundation, Nov. 2012. Web. 19 Mar. 2013.

4)

Creative Community Builders for 1st Act Silicon Valley. "There's No Place Like Silicon Valley: An Emerging Cultural Ecosystem for the 21st Century." *Community and Culture*. N.p., 1 July 2009. Web. 15 Mar. 2013.

5)

Donato-Weinstein, Nathan. "Silicon Valley's Campus past Defines Its Future." - *Silicon Valley Business Journal*. American City Business Journals, 5 Feb. 2013. Web. 19 Mar. 2013.

6)

"Electronic Arts Show Project Info." *SWA*. SWA Group, 2013. Web. 19 Mar. 2013.

7)

Goble, Gorgon. "How the Valley Was Won: The Birth of Technology in Silicon Valley." *Digital Trends*. Designt Technica Corporation, 23 July 2011. Web. 19 Mar. 2013.

8)

Hoge, Patrick. "Twitter HQ Site: Details Revealed." - *San Francisco Business Times*. San Francisco Business Times, 11 May 2012. Web. 19 Mar. 2013.

9)

Livingston, George, and Christie Alexander. "Top Business Park Locations: Trends Affecting Business Parks Today: Factors Affecting Business Parks Today." *Top Business Park Locations: Trends Affecting Business Parks Today*. The Magazine of Corporate Real Estate Strategy & Area Economic Development, Nov. 2010. Web. 19 Mar. 2013.

10)

Silicon Valley Community Foundation. "Regional Planning: Building Sustainable Land Use and Transportation Plans to Secure the Future of Silicon Valley and Its Residents." *Grantmaking Strategies Research Paper*. Silicon Valley Community Foundation, 10 Sept. 2008. Web. 19 Mar. 2013.

11)

Weiss, Joseph W. "The Business Culture of Silicon Valley: A Turn-of-the-Century-Reflection." *Journal of Management Inquiry* 9.1 (200): 37-44. *Sage Journals*. Sage Publications, Mar. 2000. Web. 19 Mar. 2013.

12)

Zhang, Junfu. "Growing Silicon Valley on a Landscape: An Agent-based Approach to High-tech Industrial Clusters." *Journal of Evolutionary Economics* 13 (2003): 529-48. *Clarku.edu*. Springer-Verlag, 2003. Web. 19 Mar. 2013