

ABSTRACT

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CHARLOTTESVILLE'S MARKET DISTRICT
CONCEIVED AS AN EXPRESSION OF
TERROIR AND CRAFT

Claire Grace Dickey, Master of Architecture,
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Program

An urban sparkling winery in Charlottesville, Virginia, is the focus of this thesis project. While Virginia has nearly 230 wineries, earning it a fifth-place ranking in the U.S. as a wine-producing state,¹ only 15 of those wineries currently produce sparkling wines.² However, the potential for great sparkling wine from the Commonwealth clearly exists, and in the last eight years the quality of some Virginia sparklers has begun to receive national attention.

In addition to a sparkling winery, the project also includes an urban agriculture center, a farm-to-table restaurant, a small urban farm, and a new city market in a two-block development called the Market District. This new Market District offers a unique destination for visitors to experience agriculture in the city as they learn about the culture of sparkling winemaking and the cultivation of

¹ Richard Leahy, *Beyond Jefferson's Vines: The Evolution of Quality Wine in Virginia*, (New York: Sterling Epicure, 2012), 218.

² "Wineries," Virginia Wine, www.virginiawine.org, (accessed 19 January 2013).

agriculture, and how these things sustain our environment, our economy, and our lives.

SPARKLING IN THE CITY: CHARLOTTESVILLE'S MARKET DISTRICT
CONCEIVED AS AN EXPRESSION OF TERROIR AND CRAFT

By

Claire Grace Dickey

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
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Advisory Committee:
Assistant Professor Isaac Williams, Chair
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Preface

Wine has been an integral part of society for all of recorded history. While the exact origins of wine will probably never be known, its central importance to the development of cultures around the world is undisputed. At first noted for its ability to intoxicate consumers and seemingly open an imbibers' mind and spirit to the divine, wine was also used for medicinal purposes as a pain reliever, disinfectant, and general cure-all. In truth, wine is a powerful drug and best consumed in moderation, but despite its potential for abuse and addiction, wine has historically been revered for its ability to ease physical pain, act as a cultural binder, and otherwise inspire feelings of euphoria and a joy for life.

I would not go so far as to classify myself as a wine connoisseur, although I have developed a deep appreciation for wine over the last decade. Before beginning this thesis, I had never done wine research beyond reading labels, but in the interest of developing my palate I experimented with diverse varietals from a range of regions and producers. Through trial and error I learned a lot about what I personally like to drink and enjoy sharing with others, but my ignorance of the winemaking process persisted.

Undertaking this thesis project motivated me to finally learn more about the winemaking process and its globe-spanning history. As I began reading I found myself fascinated by wine's evolution from a mysteriously fermenting fruit to a carefully crafted technical science. In particular I was enchanted by the unique production method of making Champagne, whose golden effervescence and buttery

flavor is unlike any other wine. Besides the special, hand-crafted production process, sparkling wine's immediate association with happiness and celebration lent it a quality of "specialness" that I found appealing, and that interest ultimately resulted in my decision to focus on sparkling wine for the purposes of this thesis.

Dedication

To my amazing husband, James, whose unwavering support has given me the strength to survive the last two years. Thank you for believing in me and putting up with all the craziness that accompanies extended periods of intense sleep deprivation.

I love you.

To my children, who inspire me to work hard so they can have the advantages and opportunities they deserve.

To my parents, who taught me to always do my best because nothing is impossible when one has the drive to succeed.

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I also must acknowledge the wonderful, selfless people who stepped in during the last two weeks of production to help me bring the project to completion:

Scott Behrens, Zhao Chen, Justin Cullen, Meredith Friedman, Johannah Gage, Jonathan Ing, Nicole Ng, Chau Pham, Michele Rubenstein, and Kiley Wilfong.

Lastly, thanks to my thesis committee for the many great ideas and encouragement over the last year. Isaac, David, and Mady, the thesis process has been immensely challenging, but I will leave the University of Maryland a better architect, and for that I am very grateful.

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Chapter 1: Introduction

Celebration, warmth, exuberance, family, friends, laughter, culture, elegance, luxury – each of these words represents qualities one might associate with Champagne and sharing a bottle of bubbly with loved ones. As a varietal, sparkling wines are much younger than their still counterparts since they were only “discovered” in the late 17th Century. However, while still wines have become ubiquitous in almost all local grocery stores, sparkling wines have retained a reputation for being a special occasion wine. Weddings, anniversaries, new jobs, promotions, births, christenings, etc., any of these milestones practically require a Champagne toast to celebrate their importance, but excluding special events, sparkling wines are rarely enjoyed.

Why is sparkling wine reserved almost exclusively for special occasions? It actually pairs marvelously with food, and as new sparkling wines come on the market from places such as Spain, Italy, Australia, South Africa, and the United States, the newcomers are increasingly more affordable and of better quality, sometimes even beating out their French competitors in wine tastings.

For the purposes of this project I am focusing on the local Virginia wine industry, which has only been producing sparkling wines since the mid-2000s. Even though only a handful of Virginia wineries have started making this effervescent wine, early experiments are showing considerable promise. Some in the business, to include winemaker Claude Thibaut of Thibaut-Janisson Winery, believe that Virginia sparkling wines have more potential to rival French Champagnes than

those produced in California, and he has worked diligently over the last eight years to make world-class sparklers in the state. To underscore the quality of his product, in 2009 newly-elected President Barack Obama chose to serve Thibaut-Janisson's Blanc de Chardonnay at his first State Dinner.

At the beginning of this thesis journey, I spent a considerable amount of time researching the history of sparkling wines. Traveling to Reims and Épernay, the two largest cities in the Champagne, I visited a number of Champagne wineries to complement my academic study. Over the course of the fall semester I also visited sparkling wineries in the Napa and Sonoma Valleys to learn how established American wineries operated in counterpoint to their French predecessors. Lastly I travelled to numerous wineries in Virginia to learn how the local industry portrays itself and to get an idea of how Virginia winemakers envision their undeniably bright future.

After analyzing the distribution of wineries across Virginia on a map, it quickly became evident that the geographical and commercial center of the industry is focused in the vicinity of Charlottesville. Famous for Thomas Jefferson's Monticello, the University of Virginia, and James Madison's Montpelier, Charlottesville draws more than two million visitors each year. With so many tourists, in addition to the nearly 200,000 residents that live in the greater Charlottesville area, there is ample opportunity for a sparkling winery to achieve success in the city. As an added bonus, thus far there are not currently any wineries located within the city limits, so this would be the first of its kind in the area and could potentially serve as a central

“starting point” for visitors who intend to tour any or all of the five Monticello Wine Trails that surround the Charlottesville city limits.



Figure 1. *Partial screen shot of the Monticello Wine Trail’s website showing the five winery circuits around Charlottesville: the Northern Trail; Eastern Trail; Western Trail; Southern Trail; and Gateway North. Altogether these five trails cover 30 of Virginia’s 229 wineries.*

Image source: <http://www.monticellowinetrail.org/#/trails/introduction>

As part of this urban winery, I am including the entire winemaking process from initial grape pressing on the crush pad to the ultimate retail sale in the winery’s gift shop. Exhibit spaces are liberally distributed throughout the facility to educate visitors about sparkling wine as well as the emerging Virginia wine industry. An expansive tasting room allows guests to taste the sparkling wines made onsite that have been paired with locally-sourced meats, cheeses, and baked goods, and rentable event spaces provide a unique venue for weddings, conferences, and other types of gatherings. A small farm-to-table restaurant further showcases the bountiful harvest that comes from the Commonwealth and celebrates the state’s rich agricultural community.

In the larger spirit of celebrating the local economy and Charlottesville's growing reputation as an agricultural and locavore hub, the sparkling winery will be designed as part of a larger campus that also includes an urban farm and agriculture center. This hybrid institution will serve to educate the public on how to make healthier food choices, how to better take advantage of fresh, locally-sourced food options, and even how to grow one's own garden if one is unwilling (or unable) to pay premium farmer's market prices. Together these program elements – sparkling winery, urban farm, and agriculture center – will form a key part of Charlottesville's newly planned Market District.



Figure 2. Charlottesville's planned Market District is located one block south of the Downtown Mall. Bordered on the north by Water St., on the south by South St., and on the west and east by 2nd St. SW and 2nd St. SE (respectively), the Market District could potentially become a vibrant new mixed-use destination. Anchoring the new development will be the popular City Market, an open-air, seasonal farmer's market whose goal is to support local entrepreneurs and promote healthy, sustainable living. The City Market currently operates on the western lot on Saturday mornings from April to December.

Image Source: By Author.

Charlottesville's Market

District is currently still in the early planning stages. Eventually it will be realized on the two blocks immediately south of the Downtown Mall between 2nd Street SW and 2nd Street SE. For decades these two blocks have functioned as underutilized surface parking lots which wasted its development potential. The vision of the Charlottesville Market District

Alliance (CMDA) is that the new

Market District will function as “a great asset to the city that is mature, of high

quality, culturally diverse, economically viable, and a well-recognized destination in its own right.”³

A major component of the new Market District will be the City Market, which currently operates onsite as an outdoor, seasonal farmer’s market. It has operated in this location since its inception in 1973. More than 150 local vendors attract 5,000 shoppers each weekend in search of fresh, locally-grown agricultural products. In building a permanent structure for the City Market, the CMDA hopes to firmly establish the “complementary relationship between urban markets and rural land use in our region.”⁴ The project also provides an opportunity for the market to reinvent itself as a year-round city amenity whose overwhelming popularity would serve as an economic catalyst not just for the Market District, but also the Downtown Mall and the larger Charlottesville area as well.

Bringing winemaking and farming into the city represent a significant paradigm shift from traditional agricultural practices. Historically both of these functions have taken place in rural areas, detached from the urban fabric, but as awareness of global warming and chemical-laden farming practices have risen over the last decade people are increasingly seeing the value of urban agriculture. People are embracing sustainability and choosing to take more control over their personal food chain, with the result being that the Market District provides a uniquely appropriate setting for an urban sparkling winery, farm, and agriculture center to help reconnect the public with nature and encourage a more sustainable lifestyle. Visitors also gain awareness of the taste of the region because wine, fruit, vegetables, herbs,

³ CMDA Reference Packet cover letter

⁴ Ibid.

and honey all express the flavors of their geographic origins and climate, which in the wine world is called *terroir*, but whose definition is appropriate for the other agricultural products as well.

Over the course of my academic research and winery visits I began drafting a list of keywords I felt best reflected the characteristics of Virginia sparkling wines, the local agriculture industry, and the Piedmont region in general. The point of the exercise was to compile an inspirational library to which I could refer once I started thinking about the eventual architecture. A few of the terms that made the list very early were “culture,” “craft,” “place,” “*terroir*,” and “community.” Each of these terms help shape the theoretical backbone of the thesis and inspire the design. The end result is an architecture that is deeply rooted in the earth as an expression of the local *terroir*.

Chapter 2: Sparkling Wine, A Handcrafted Tradition

Early Sparkling Wine History

A charming urban legend tells of how one day in 1691 the head winemaker at Hautvillers Abbey, located in France just outside the town of Épernay, breached a cask of wine to see how it was aging and was delighted to discover that it had somehow acquired a lovely fizz. He reportedly shouted to his fellow Benedictine brothers, “Come quickly, I’m tasting the stars!” Unfortunately this story is now believed to be a fabrication, but in fact Dom Pérignon was an expert winemaker who did more for the science of winemaking than anyone before him. He came to Hautvillers as a young monk and spent 47 years improving the art of winemaking and working to make the “best wine in the world.”⁵ The famous Champagne that now bears his name is a testament to Dom Perignon’s reputation as one of the best winemakers in history.

Even though sparkling wine is today considered the most exceptional of wine varieties, its trademark effervescence for many years was viewed as a flaw. Early winemakers did not understand wine science well enough to know what created bubbles in their wines, but they spent years ineffectively trying to get them out. Not until the mid- 18th Century did sparkling Champagne wines find a niche market among the aristocracy and very wealthy members of the French court. This popularity with society’s elite quickly earned Champagne a reputation as a luxury

⁵ “Dom Pierre Pérignon: Creating ‘The Best Wine in the World,’” Dom Pérignon, <http://www.domperignon.com/image/dom-pierre-perignon/>, (accessed 27 November 2012).

wine, and its subsequent high prices also ensured only the wealthy could afford to drink it.

Sparkling Wines in the Twentieth Century

In 1927 a French law was enacted that strictly defined the boundaries of the Champagne region, and only sparkling wines grown and produced within those boundaries were allowed to use the name “Champagne.” Even sparkling wines made elsewhere in France had to find new names. However, because Champagne was a luxury wine that demanded the highest prices, lower-quality imitations inevitably flooded the market. Sparkling wines from all over the world had the name “Champagne” emblazoned on the label hoping to cash in on champagne’s hard-won reputation.

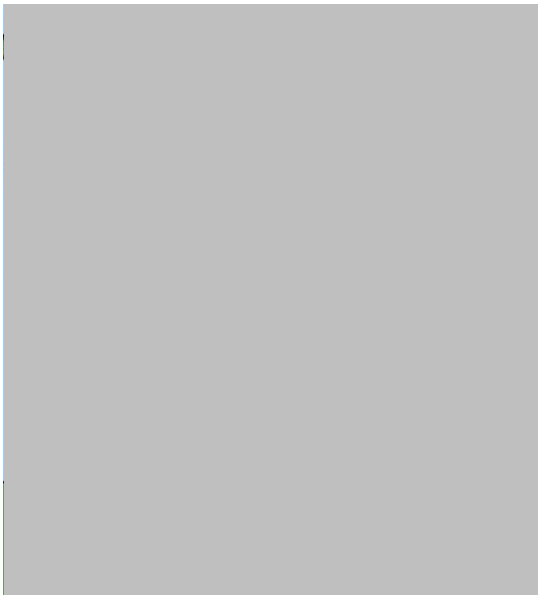


Figure 3. Map of France showing the Champagne region highlighted in yellow. Only sparkling wine from this small area may be called “Champagne,” although other regions of France and many other countries around the world also make sparkling wines.

Image source:
<http://www.bargeladycruises.com/pages/champagne/401.php>

In a massive political effort to protect the integrity of authentic Champagne, French winemakers fought vigorously against the universal use of the term “Champagne” on the label. In time, most other sparkling winemaking countries agreed to find a new term for their sparkling wines.

Although French Champagnes are still the most famous, and expensive, of the sparkling wines, other countries

have adopted signature names for their sparkling wines too. Spain makes Cava, Italy produces Prosecco and Asti, Austria and Germany have Sekt, Espumante comes from Portugal, and South Africa calls its sparkling wines Cap Classique. Outside the borders of the Champagne region, French sparkling wines are called Crémant or Moussoux. In the United States a proprietary name has not been selected so most American sparklers are simply sparkling wines.

Sparkling Wines in Virginia

In Virginia winemakers have only recently begun to produce sparkling wines; however, while it is true that the Virginia wine industry is still a developing one, American winemaking has its roots in Virginia. Wine has been produced in the state since the very first settlers landed at Jamestown in the 17th Century,⁶ and just as the quality of Californian wines has been steadily improving over the last thirty years, so too have those in the Commonwealth. Today Virginia is the fifth largest producer of wines in the United States, behind California, Washington, Oregon, and New York.⁷

⁶ “Virginia Wine Today,” Virginiawine.org, 2012. <http://www.virginiawine.org/learn/wine-history/> (accessed November 27, 2012).

⁷ Ibid

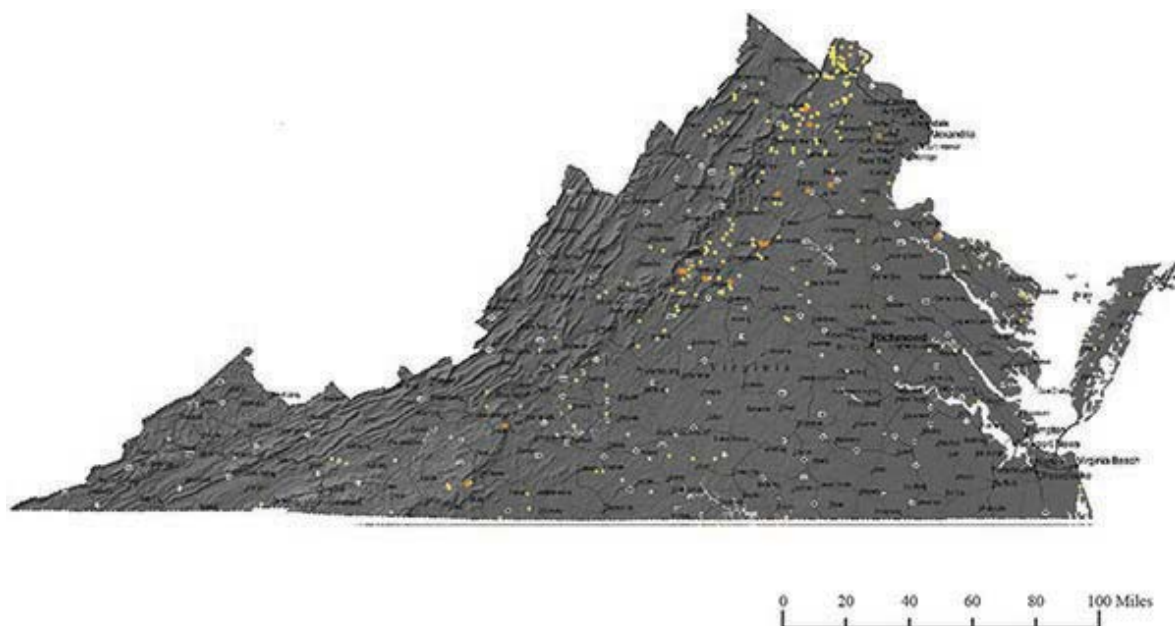


Figure 4. Each of the 229 wineries currently operating in Virginia is indicated by a yellow dot, except for the wineries that make sparkling wines and are marked by an orange star. At this time there are 14 wineries that produce sparklers in the state.

Image source: By Author

There are currently nearly 230 wineries in the state producing everything from Cabernet Franc to Norton to Viognier. In 2007, Bruce Shoenfeld of Travel and Leisure magazine numbered Virginia as one of five up and coming wine regions to note, among a grouping that included wine regions in Chile, Italy, Spain, and New Zealand, saying these areas “should be on the must-visit list of any adventurous wine traveler.”⁸

Making Sparkling Wine in the *Méthode Traditionelle*

Making sparkling wine according to the *Méthode Traditionelle* (sometimes called the *Méthode Champenoise*), is a fascinating process that is not well known by most wine drinkers. Nearly all fine sparkling wines are made according to this

⁸ “Virginia Wine Today,” Virginiawine.org, 2012. <http://www.virginiawine.org/learn/wine-history/> (accessed November 27, 2012).

method, and it is an intensely handcrafted process that requires an unparalleled level of human guidance to achieve the characteristic bubbly, toasty-flavored beverage that many enjoy as a complement to life's milestones.⁹

The Grapes



Figure 5. *Left: Pinot noir grapes add structure to the overall flavor of sparkling wines. Center: Pinot meunier grapes give sparkling wines a toasty, brioche flavor. Right: Chardonnay grapes lend sparklers a fresh, fruity flavor.*

Image sources (from left to right): Photo by Harry Peterson-Nedry; Photo by Berndt; Photo by Swallowtail.

Most sparkling winemakers do not grow their own grapes. They buy grapes from designated vineyards with whom they often have longstanding relationships.¹⁰ Almost all sparkling wine is made from a combination three different grapes: pinot noir, pinot meunier, and chardonnay. There are other grapes in the pinot family that are acceptable as well, but the majority of sparkling wines are made from a blend of the three previously mentioned.

In Virginia the climate is not appropriate for pinot noir grapes, so most sparkling wines are made only with chardonnay grapes, although in the future there may be some experimentation with other grapes as well, such as viognier or chenin

⁹ Becky-Sue Epstein. *Champagne: A Global History*. (London: Reaktion Books Ltd., 2011), Kindle Edition. 1003-9.

¹⁰ Epstein, *Champagne*, 1015-22.

blanc.¹¹ Sparkling wines made entirely of white wine grapes are referred to as *blanc de blancs*. Conversely, any sparkling wines made entirely from red grapes are called *blanc de noirs*.¹²

First Fermentation

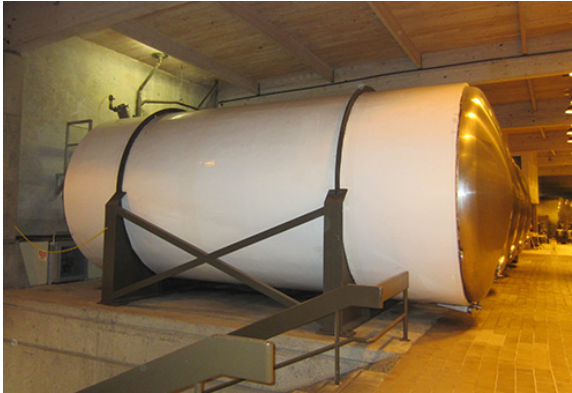


Figure 6. Fermentation tanks at Domaine Chandon in Yountville, CA

Image source: By Author

The process of making sparkling wine is unique among wines in that there are two distinct fermentation phases. For the first fermentation phase, grapes are carefully harvested by hand, sorted, and then pressed. The resulting juice is pumped into large fermentation

tanks where the yeasts found naturally on the grape skins slowly consume the sugars present in the grape juice, turning it into non-sparkling, or still, wine. Once all the sugars have been consumed the yeasts die and sink to the bottom of the fermentation tanks. The sediment is then left behind when the wine is pumped out of the tanks.

Blending

As the grapes are initially pressed and siphoned into fermentation tanks, the juice is kept separate according to varietal, vineyard, and even sometimes according to separate plots within a vineyard. After the fermentation phase has finished, samples from each of the tanks are tasted and custom-blended by the winemaker.

¹¹ Claude Thibaut, interview by Author, Afton, VA, January 12, 2013.

¹² Epstein, *Champagne*, 1003-9.



Figure 7. *Champagne cuvées are a carefully crafted mix of wines from different varietals, vineyards, and years.*

Image source: <http://www.champagne-beaumont.com/>

This allows the winemaker to craft his or her house's signature formula blend, called a *cuvée*. Once the "correct" *cuvée* has been determined, all the wine is mixed and then bottled along with a small amount of new yeast and sugar added to each bottle. A

temporary bottle cap is applied and the wine then goes into storage for the next two (or more) years.

Second Fermentation



Figure 8. *A bottle of sparkling wine is backlit to show the lees that have settled at the bottom of the bottle. Most sparkling wines are aged with the lees in the bottle for two years or more.*

Image source: <http://www.thepperfectcellar.com/blog/champagne-how-it-is-made/>

The addition of new yeast and sugar to the bottles of wine instigates a second fermentation phase. This is when sparkling wine's characteristic effervescence is created as the process of fermentation off-gases carbon dioxide, which gets trapped in the bottle and causes small bubbles to form.

After the sugar is entirely consumed by the yeast cells, they slowly die and sink to the bottom of the bottle, where they continue to influence the flavor of the wine. Over time as the sparkling wine rests in storage, the yeast sediment, or lees, imbues the sparkling wine with its characteristic toasty, creamy flavor.

Riddling

After the multi-year aging period has passed, the wines are slowly turned and tilted from a horizontal position into a completely vertical position. Historically, a professional bottle turner, known as a “riddler,” would go through the cellar each day, turning and tilting the bottles slowly so the lees settled into the neck of the Champagne bottles. Eventually the bottles were turned until they were

entirely vertical. An expert riddler could turn more than 30,000 bottles a day, and the exacting profession was passed down from one generation to the next. Today,

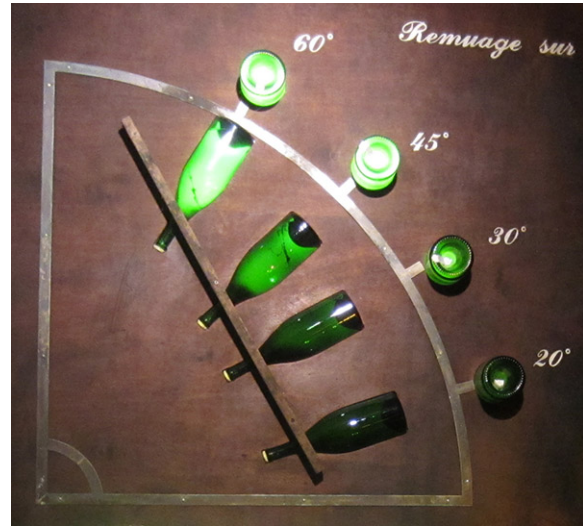


Figure 10. The process of remuage is when the dead yeast sediment, or lees, is slowly shifted from the body of the bottle into the neck in preparation for disgorgement. Over the course of a week the bottles are turned and tilted a little each day until the bottles are all vertically positioned.

Image source: By Author



Figure 9. Left: A riddler turning the champagne bottles to shift the lees. Right: A modern riddling machine slowly rotates and upends the bottles of sparkling wine instead of a riddler.

Image source, left: <http://vinoprod.free.fr/remuage.html>.

Image source, right: By Author

automated riddling machines are used by many sparkling wineries to turn the bottles, but hand-turning is still exclusively used by many houses for Vintage releases.

Disgorgement

Once the lees have settled entirely into the neck of the sparkling wine bottles, the bottles are moved out of the caves, racked, and then partially sunk into an extremely cold saline or glycol solution, effectively flash-freezing the lees in the neck of the wine bottles. The temporary bottle caps are quickly removed by a machine, and the built-up carbon dioxide pressure behind the lees shoots the frozen mass out of the bottle. What's left behind is a completely clear, effervescent sparkling wine.

Finishing

To fill up the small amount of space left by the ejected lees, a proprietary mixture of wine and liquor, called the *dosage*, is added to the bottle. At this time the bottle is washed, corked, and caged. It then ages another two or three months in the caves. At the end of this final aging period, labels are applied, the bottles are packaged for shipment, and the sparkling wines are at last ready to drink.

Sparkling Wine Miscellany

Unlike many other wines, most sparkling wines are not intended to be cellared or aged for long periods of time. It is generally best to drink sparkling wines within two years of purchase. Vintage sparkling wines may be aged a bit longer, but most experts do not recommend keeping sparkling wines for more than a few years to

avoid loss of carbonation and/or flavor. Sparkling wines are released by wineries when they are ready to be consumed.¹³

Label	Atmospheres
Perlant	less than 2.5 atm
Pétillant	2.5 - 3.5 atm
Crémant	3.6 atm
Mousseux	5.0 - 6.0 atm

Table 1. *Measure of carbonation in levels in sparkling wines.*

Source: By Author

NOTE: Most soft drinks measure between 3.5 - 4.2 atmospheres

Label	Grams of Sugar/L
Brut Nature	less than 3 grams (no dosage added)
Extra Brut	less than 3 grams
Brut	less than 15 grams
Extra Dry	12-20 grams
Sec	17-35 grams
Demi-Sec	33-50 grams
Doux	more than 50 grams

Table 2. *Measure of sweetness levels in sparkling wines.*

Source: By Author

¹³ Epstein, *Champagne*, 1134-41.

Chapter 3: Local Agriculture and the Farmer's Market

The Current State of Affairs



Figure 11. Most of the food in grocery stores comes from halfway around the world, traveling an average 1,500 miles before it is placed on grocery store shelves. Only the hardiest fruits and vegetables are planted by industrial farmers because they can withstand rough treatment. The result is that consumers are left with fewer choices than generations past.

Image source: flickr Creative Commons by roboppy

The merchandise offered in grocery stores today comes from all over the world, and while some may originate at local farms or factories, most often the food on the grocery store shelves comes from someplace halfway around the world. As meats and produce are increasingly shipped longer distances with more globalized processing procedures, the time that passes from the harvesting of food to its being stocked on grocery store shelves often includes trans-continental shipping intervals. The average piece of produce travels approximately 1,500 miles from farm to store,¹⁴

¹⁴ Jennifer Cockrall-King. *Food and the City*. (Amherst: Prometheus Books, 2012), 11.

which means that only foods able to withstand rough handling and packaging without being damaged tend to be grown by industrial farmers, and the produce is also harvested before it is ripe so it can ripen in transit rather than on the plant as nature intended. For consumers there are major flavor and nutritional consequences to these actions.

As an example of the contemporary farming mentality, when commercial tomato growers were asked to list the most valued qualities in their produce, yield per acre, size, tolerance to shipping, color, and pest resistance all ranked higher than flavor and nutrition.¹⁵ Since flavor and nutritional value of produce are not primary considerations for farmers and the scientists who are genetically modifying seeds, recent studies show that most fruits and vegetables sold in grocery stores today have fewer valuable nutrients than they did fifty years ago, a phenomenon sometimes referred to as the “dilution effect.”¹⁶

At the store, supermarket management is not interested in having any more food on store shelves than absolutely necessary because much of the inventory is perishable. Over the last fifty years, grocery stores have developed a tightly-controlled system of food delivery that ensures the stores minimize losses and maximize profit. A rather startling statistic is that local grocery stores only carry about three days’ worth of food on their shelves. This short supply of food means

¹⁵ Peter Ladner. *The Urban Food Revolution: Changing the Way We Feed Cities*. (Gabriola Island: New Society Publishers, 2011), 97-98.

¹⁶ Andre Picard. "Today's Fruits Lack Yesterday's Nutrition." *Globe and Mail*, July 6, 2002.

that if anything were to disrupt the supply chain, consumers would quickly encounter a food crisis.¹⁷

For the remainder of the grocery store merchandise that is not grown by Mother Nature, the modern food industry has packed our foods with so many processed ingredients that they have very little in common with the unprocessed foods we should be eating. Store-bought bread, for example, should only contain a handful of ingredients: flour, yeast, water, and salt. However, if one reads any of the labels in bread aisle, it can be baffling to comprehend how such a simple recipe became so complicated.



Figure 12. *Pre-packaged bread from the grocery store contains numerous chemicals in order to increase the product's shelf life. Consuming such highly processed foods is unhealthy in the long run and contributes to Americans' poor diet quality.*

Image source: <http://www.allouteffort.com/2012/10/how-to-read-food-labels.html>

In the United States, it is worth noting that only a handful of companies control the majority of the food industry. As big agriculture grew, the number of fruit and vegetable species farmed for public consumption decreased so that now only about 150 different food-plant species are produced on a large commercial scale, despite farmers having domesticated over 5,000 species.¹⁸ Globalization has ensured that we can purchase strawberries in December, but consequently we are losing any

¹⁷ Cockrall-King, *Food and the City*, 29-31.

¹⁸ Cockrall-King, *Food and the City*, 28.

ability to play an active role in what we are consuming, how our food is produced, or how it is processed.

An Argument for Local Agriculture

Environmentalism David Orr lectures that communities need to reinvent local agriculture because the long-distance food distribution system currently in place is unsustainable, and food prices everywhere are rising as a result. Growing food locally reduces the travel distance of food from farm to grocery store, otherwise referred to as “food miles.” Sourcing food from local farms or growing one’s own food also minimizes the amount of fuel needed to move the food to its ultimate destination, which can resultantly decrease harmful air pollution significantly.¹⁹

While it is tempting to make an argument for buying local for the sole purpose of reducing food miles and their potential impact on the environment, if one backs out to look at the bigger picture of energy usage, food production and consumption in reality only accounts for about 10% of first-world energy consumption, and most of that energy results from the production of meat, not produce. It takes about 25 times more energy to yield one calorie of beef than to produce one calorie of corn, and producing one pound of beef consumes 1,857 gallons of water as compared to 31 gallons needed to produce a pound of potatoes.²⁰

To avoid making an overly-simplified argument, one must acknowledge the benefits of importing foods from other places. Society depends on trade for economic sustenance and growth and has done so since the beginning of time. An essential point one must make is that the premise of eating locally-sourced food does not have

¹⁹ Ladner, *The Urban Food Revolution*, 15-17.

²⁰ Ladner, *The Urban Food Revolution*, 18-19.

to be an “all or nothing” exercise. Consuming local food can only realistically be a part of one’s diet; a completely local diet would be a needlessly self-depriving eating strategy. However, by simply making the decision to eat more local fruits and vegetables when they are in season one can make a significant step towards fostering a more sustainable food system.²¹

One of the most convincing arguments for buying in-season food from a local farmer is that unlike industrial farmers, smaller farmers who are growing on a less industrial scale can pay more attention to factors such as flavor and nutrition, which consumers cite as their most important food values.²² In discussing the benefits of local food production one must note

the frequent implementation of organic farming practices by these small farmers. Even though synthetic chemical pesticides have been utilized in mass quantity since the 1940s, scientists still do not fully comprehend the breadth of ways these chemicals can invade the body and affect overall health. After decades of research and study, the general consensus is that there are significant reasons to be

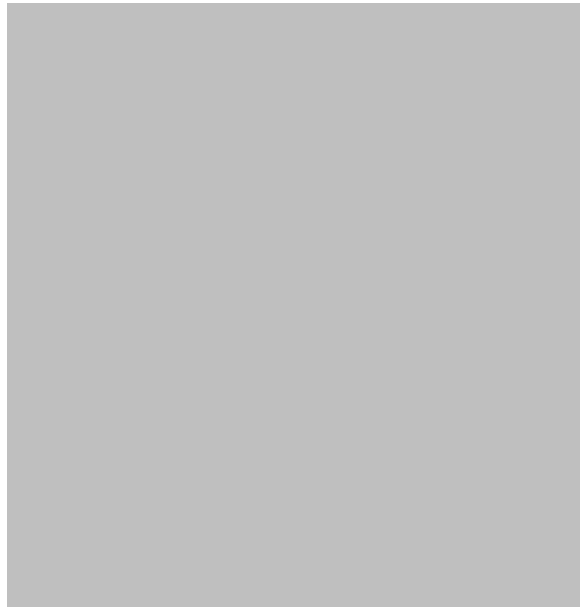


Figure 13. Cartoonist Charles Addams depicts a gruesome reality where people are responsible for poisoning themselves. Environmentalist Rachel Carson feared that the indiscriminate use of synthetic chemicals could turn Addams’ morbid fantasy into reality.

Image source: <http://www.charlesaddams.com/print-gallery.shtml>

²¹ Ladner, *The Urban Food Revolution*, 19.

²² Ladner, *The Urban Food Revolution*, 98.

concerned about their effects on the human body. In her seminal book, *Silent Spring*, environmentalist Rachel Carson likened the effect of insecticides to the gothic world of cartoonist Charles Addams, creator of the Addams Family cartoons: “It is a world where the enchanted forest of the fairy tales has become the poisonous forest in which an insect that chews a leaf or sucks the sap of a plant is doomed. It is a world where a flea bites a dog, and dies because the dog’s blood has been made poisonous, where an insect may die from vapors emanating from a plant it has never touched, where a bee may carry poisonous nectar back to its hive and presently produce poisonous honey.”²³ While the agrochemicals used today may not be quite so toxic as Carson portrays, they are certainly not entirely benign. Moreover, buying organic produce does not necessarily guarantee one’s food will be completely chemical-free if the surrounding farms are farmed conventionally – that is, with agrochemicals – or if the manure used for fertilizer was purchased from suppliers where the livestock was regularly treated with growth hormones and antibiotics.²⁴

Despite the danger of cross-contamination, buying organic food is not a waste of money. Organic farmers do use fewer agrochemicals, and they are also dedicated to implementing environmentally-friendly farming practices that protect the health of the soil and shed less harmful chemicals into the water supply.²⁵ The ultimate outcome of these methods ensures fewer chemical residues are eaten by people while the soil maintains a higher level of overall health, and recent studies indicate that

²³ Rachel Carson. *Silent Spring*. (New York: First Mariner Books, 1962), 32.

²⁴ Charles L. Harper and Bryan F. Le Beau. *Food, Society, and Environment*. (Upper Saddle River: Pearson Education, Inc., 2003), 22-23.

²⁵ Harper and Le Beau, *Food, Society, and Environment*, 23.

healthier soils yield more nutritious food,²⁶ whose benefits can be compounded if the food is both organic and locally-grown so it doesn't deteriorate in transit.

The Farmer's Market

Shopping at local farmers markets has become undeniably trendy recently, and their number over the last decade has exploded to meet the new demand. In mid-2012 there were 7,864 farmers markets in the United States, which was a 9.4% increase from the previous year,²⁷ and as people become more environmentally-conscious and demand more sustainably-farmed fruits, vegetables, meats, and other food products, the future of farmer's markets is undeniably bright. But choosing to shop at the local farmers' market should not be a trendy decision; rather, it should be a decision based around the concepts of taking more control over one's food choices, the processes by which that food is produced, and its potential to greatly affect one's overall health and well-being.

The primary reason people choose to shop at the farmer's market is to find fresh whole foods picked at the peak of their taste and nutritional quality. Shopping at the farmer's market puts the consumer in direct touch with a very short food chain that gives one more control over his or her diet and overall health.²⁸ Unlike a supermarket shopping experience, if one has any questions about the farming methods employed by a particular farm or their potential use of agrochemicals, it is possible to ascertain the answer through a quick conversation with the vendor and

²⁶ Michael Pollan. *In Defense of Food: An Eater's Manifesto*. (New York: Penguin Books, 2008), 170.

²⁷ Ladner, *The Urban Food Revolution*, 169.

²⁸ Pollan, *In Defense of Food*, 157-158.

subsequently make an educated decision about whether or not to purchase from that farmer.

The incidental consequence of “shaking the hand that feeds you” is that the consumers and local farmers are able to form personal relationships with each other that in turn foster a stronger sense of community. Most farmers’ markets sell more than just food; there may be concurrent public events, festivals, children’s activities, and educational stands that all create a full shopping experience.²⁹ On a bright, sunny day, walking from stand to stand elevates the task of grocery shopping from a mundane exercise into an opportunity to make friends with neighbors and build new relationships. These relationships in turn forge a stronger connection between the urban and rural economies, helping to increase the community’s understanding and respect for the importance of each environment.



Figure 14. *The simplified food chain encountered when buying food from the local farmers market cuts out all the middle men and helps reconnect people with their food sources.*

Image source: <http://health.wealthwire.com/news/food/182>

²⁹ Ladner, *The Urban Food Revolution*, 166-168.

From an economic standpoint, grocery shopping at the farmer's market directly supports the local economy. When farmers sell their food to grocery stores they typically earn around 18 cents for every dollar of sales, but if they sell their wares at farmers' markets they keep up to 90 cents per dollar. This drastic increase in profit ensures more money stays in the local economy and boosts other local businesses in turn. In London, a study concluded that street and farmers markets are "major drivers of their local economies, attracting trade to and complementing other local retailers, and creating the 'social glue' that holds communities together."³⁰ Although many people consider farmers markets to be patronized solely by eco-friendly urbanites that choose to needlessly overspend on groceries, there is also a social justice aspect of many farmers markets as they attempt to increase the reach of their goods into urban food deserts, where grocery stores are scarce and poorly stocked. Greenmarket, a coalition of urban farmers markets in New York City, embraces a two-part mission: "To promote regional agriculture by providing small family farms the opportunity to sell their locally grown products directly to consumers, and to ensure that all New Yorkers have access to the freshest, most nutritious locally grown food the region has to offer."³¹ When farmers bring their wares to urban farmers markets, they provide access to fresh, healthy produce for low-income residents, and many cities provide vouchers to help them reach a basic

³⁰ Ladner, *The Urban Food Revolution*, 168.

³¹ Greenmarket Farmers Markets. 2012. <http://www.grownyc.org/greenmarket> (accessed December 13, 2012).

state of food security.³² In the United States, approximately 14.5% of households were food insecure in 2010.³³

³² Harper and Le Beau. *Food, Society, and Environment*. 199.

³³ Alisha Coleman-Jensen, Mark Nord, Margaret Andrews, Steven Carlson. *Household Food Security in the United States in 2010*. United States Department of Agriculture, Washington, DC: U.S. Dept. of Agriculture, 2011.

Chapter 4: Charlottesville

City Beginnings

Charlottesville was founded in 1762 when Virginia's General Assembly established 50 acres of land near Albemarle County's midpoint as the county's new civic and commercial center. The town was deferentially named for King George III's wife, Queen Sophia Charlotte.³⁴ Since there was no previous settlement on the site, which had been selected due to its convenient position at the convergence of three major roads, the new town was laid out according to a regular orthogonal grid. At the northeast corner of the plan, the town's main square was bordered on one side by Jefferson Street, named in honor of local surveyor and prominent citizen Peter Jefferson, who was

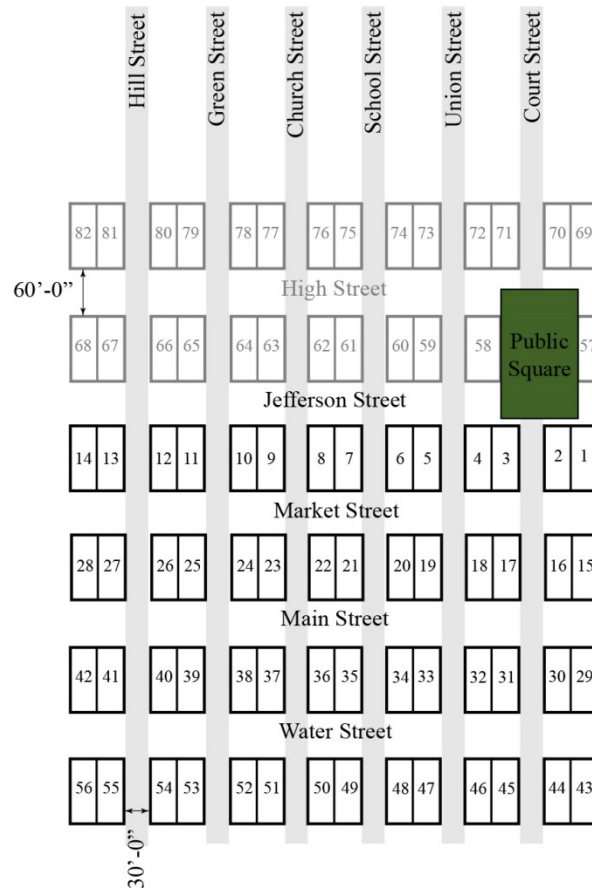


Figure 15. Diagram of Charlottesville illustrating the city's early growth. Lots 1-56 and the Public Square comprised the original 50 acres allocated for the city in 1762, while lots 57-82 were added in 1818. Drawing based on information from the Col. William Woods survey map, dated 17 Dec. 1818.

Image source: By Author

³⁴ Eryn S. Brennan and Margaret Maliszewski. *Images of America: Charlottesville*. (Charleston, SC: Arcadia Publishing, 2011), 9.

the father of Thomas Jefferson.³⁵

Over the next hundred years as Charlottesville grew, new land was periodically annexed by the town. In 1888, the state legislature approved the annexation of enough land that Charlottesville's population grew to 5,000. This addition was sufficient for Charlottesville to be recognized as an independent city.³⁶ While lack of proximity to a navigable river limited early growth of the city, once the railroad came to town in the mid-nineteenth century trade and communication became easier and the rate of city growth increased.³⁷

Thomas Jefferson in Charlottesville

Thomas Jefferson was born in 1743 at Shadwell, his father's plantation located just southeast of Charlottesville.³⁸ Jefferson lived at Shadwell for the majority of his childhood and later attended the College of William and Mary to study law. In 1769 he began building his own home on land that had been bequeathed to him by his father.³⁹ Monticello, or "Little Mountain," eventually became a cherished American landmark, but during Jefferson's lifetime it was his personal architectural experiment. He continued to revise Monticello's design for the rest of his life, and many of Jefferson's visitors and relatives would comment, sometimes negatively, on the near-constant construction.

The University of Virginia was founded by Thomas Jefferson in 1819, and he considered its establishment to be one of his greatest achievements. He situated the

³⁵ Brennan and Maliszewski, *Images of America*, 7.

³⁶ Brennan and Maliszewski, *Images of America*, 21.

³⁷ The Institute for Advanced Technology, "Charlottesville: A Brief Urban History," University of Virginia, July 28, 2005. <http://www2.iath.virginia.edu/schwartz/cville/cville.history.html> (accessed November 17, 2012).

³⁸ John Hailman. *Thomas Jefferson on Wine*. (Jackson, MS: University Press of Mississippi, 2006), 28.

³⁹ Hailman, *Thomas Jefferson on Wine*, 39.

university one mile west of Charlottesville in a deliberate move to create a separate “Academical Village” surrounded by nature.⁴⁰ Of this “hobby of my old age,” Jefferson said, “This institution will be based on the illimitable freedom of the human mind. For here we are not afraid to follow truth wherever it may lead, nor to tolerate any error so long as reason is left free to combat it.”⁴¹ His idealistic vision resulted in the first non-sectarian university in the United States that educated students in practical careers and public service.⁴²

For the design of the university classrooms, dorms, and outbuildings, Jefferson chose to follow the architectural tenets of the Italian architect Palladio, although he also solicited design input from his friends and fellow gentlemen



Figure 16. A view of the University of Virginia showing the original, open south boundary of the Lawn as designed by Jefferson. Drawing by J. Serz, from 1856.

Image source: University of Virginia Online Visual History

architects Dr. William Thornton and Benjamin Latrobe. For the Rotunda, which anchored the north end of the Lawn and housed the university’s library, Jefferson designed a half-scale Pantheon to symbolize the library’s importance as a temple to

⁴⁰ The Institute for Advanced Technology, “Charlottesville: A Brief Urban History,” University of Virginia, July 28, 2005. <http://www2.iath.virginia.edu/schwartz/cville/cville.history.html> (accessed November 17, 2012).

⁴¹ Jefferson to William Roscoe, Andrew A. Lipscomb and Albert E. Bergh, ed. *The Writings of Thomas Jefferson*. Vol. 15. 20 vols. (Washington, DC: Thomas Jefferson Memorial Association of the United States, 1903-04), 303.

⁴² “Short History of U.Va.,” University of Virginia, August 3, 2010. <http://www.virginia.edu/uvatours/shorthistory/> (accessed November 17, 2012).

learning and knowledge. The south end of the Lawn was originally left open, with views out to nature. Jefferson felt the openness represented the limitless freedom of the human mind.⁴³ The entire university was constructed of locally-fabricated brick with wood trim and plastered brick columns. Select decorative elements, such as the columns of the Rotunda, were carved from Carrara marble.⁴⁴ As both an institution and a work of architecture, the university was unprecedented. The initial design decisions made as Jefferson huddled over his drafting board affected the style of architecture preferred in the United States ever since. In Charlottesville, Jeffersonian neoclassicism was practically required for any new building project, even the most mundane of strip malls.



Figure 17. *The architectural style of the Lawn has influenced generations of architects. In Charlottesville, Jeffersonian neoclassicism is mimicked for everything from civic buildings to strip malls. The use of inspirational symbolism and precise calculation of the pavilions' proportion considered by Jefferson have been reduced to superficial veneers. Photo by Steve (Rui) Gong.*

Image source: <http://www.lincolnperryart.com/UVa/UVa1.htm>

By placing the University a mile west of Charlottesville proper, Thomas Jefferson profoundly impacted the direction of the city's eventual growth. New building occurred in a decidedly westward focus until the town and university

⁴³ Brennan and Maliszewski, *Images of America*, 51.

⁴⁴ Brennan and Maliszewski, *Images of America*, 48.

eventually came together along Main Street. The Corner, a small commercial strip of stores, restaurants, and bars, developed adjacent to the University and helped push the university in the direction of the downtown area, even as the university was expanding westward away from the city.⁴⁵

While Mr. Jefferson lived an immensely public political life, at heart he considered himself a farmer. He also was a noted lover of wine and collected them his entire life. At Monticello, Jefferson tried for decades to grow wine grapes, but as far as anyone can tell he never managed to create even a single bottle.⁴⁶ However, his well-publicized passion for finding good wines, and his unrelenting enthusiasm for experimenting with wine grapes earned him the reputation as Virginia's first, and most famous, vintner.⁴⁷

Racial Tensions Impact Downtown Development

The early twentieth century was a prosperous time for Charlottesville. Access to the city was eased by railroad transit and downtown trolleys, and roads were well paved and maintained. After WWII the University experienced a period of rapid growth, and construction of many new university buildings ensued. In addition, tourism as an industry in Charlottesville took off as the University and Monticello increasingly drew history and architecture buffs to the area.⁴⁸

⁴⁵The Institute for Advanced Technology, "Charlottesville: A Brief Urban History," University of Virginia, July 28, 2005. <http://www2.iath.virginia.edu/schwartz/cville/cville.history.html> (accessed November 17, 2012).

⁴⁶ Hailman, *Thomas Jefferson on Wine*, 371-372.

⁴⁷ Richard G. Leahy, *Beyond Jefferson's Vines: The Evolution of Quality Wine in Virginia*. (New York: Sterling Epicure, 2012), XI-XIV.

⁴⁸ The Institute for Advanced Technology, "Charlottesville: A Brief Urban History," University of Virginia, July 28, 2005. <http://www2.iath.virginia.edu/schwartz/cville/cville.history.html> (accessed November 17, 2012).

With technological advances in transportation, construction of a new downtown bypass and the Interstate 64 nearby, and subsequent suburban expansion beyond the city, businesses and residents slowly drained away from the downtown area in the late 1950s and early 60s. Concurrent with these changes, the city embraced an urban renewal development scheme in 1954 that was intended to demolish the historically black neighborhood of Vinegar Hill located at the northwestern edge of the historic downtown district.⁴⁹ Charlottesville, like other Southern cities, was resistant to the Federal law mandating desegregation, and as a result the primary commercial district for the town's African American population was leveled and approximately 600 residents forced to relocate to public housing. In its place, the city constructed McIntire Road, a number of large commercial buildings, the Federal Building, and the Omni Hotel.⁵⁰

The Downtown Mall

As the downtown population continued to decline through the 1960s, Charlottesville officials began to look for a solution to the population drain. Ultimately the decision was made to pedestrianize eight blocks of the historic downtown along East Main Street and its side streets.⁵¹ Landscape architect Lawrence Halprin designed the new downtown Mall, which started construction in 1975 and opened a year later. Oversized brick pavers created a continuous floor plane along the mall and groupings of willow oaks were planted to provide shade and

⁴⁹ Brennan and Maliszewski, *Images of America*, 81.

⁵⁰ The Institute for Advanced Technology, "Charlottesville: A Brief Urban History," University of Virginia, July 28, 2005. <http://www2.iath.virginia.edu/schwartz/cville/cville.history.html> (accessed November 17, 2012).

⁵¹ "Charlottesville Mall," The Cultural Landscape Foundation, 2012. <http://tclf.org/landscapes/charlottesville-mall> (accessed November 19, 2012).

cooling.⁵² Several small fountains were also situated along the length of the mall to provide ambient splashing and beauty. Today the Mall is a lively and vibrant pedestrian district with more than 150 shops and restaurants that is considered by many to be “Charlottesville’s public living room.”⁵³



Figure 18. A view of East Main St. looking west, showing the difference before and after Lawrence Halprin’s plan to entirely pedestrianize the Downtown Mall. Photo (left) by Ed Roseberry. Photo (right) by Jack Looney.

Image source: Brennan and Maliszewski, 102

Charlottesville Today

Charlottesville today is a thriving university town with a reputation for being among the most livable cities in the country. The city itself has a population of 43,000 residents with a metropolitan population over 200,000, and the University of Virginia enrolls more than 20,000 students and is consistently ranked among the top universities in the country. Two million tourists also visit the city annually, drawn by the area’s rich historical legacy and numerous cultural and entertainment offerings.⁵⁴

⁵² Brennan and Maliszewski, *Images of America*, 106.

⁵³ “Charlottesville Mall,” The Cultural Landscape Foundation, 2012.
<http://tclf.org/landscapes/charlottesville-mall> (accessed November 19, 2012).

⁵⁴ “Better Quality of Life,” City of Charlottesville, 2011.
<http://www.charlottesville.org/Index.aspx?page=153> (accessed November 19, 2012).



Figure 19. *After forty years to mature, the Downtown Mall is a thriving commercial destination. The willow oak trees planted down the middle of the pedestrian street provide shade for visitors and help keep the temperature comfortable. In the summer the temperature on the Mall can be up to ten degrees cooler than the surrounding areas. Photo by Jack Looney.*

Image source: Brennan and Maliszewski, 106

Chapter 5: The Big Ideas



Figure 20. *The thesis considers relocating a typically rural building typology to an urban setting - wine goes to the city!*

Diagram by Author

Initially the concept of the thesis was centered on bringing winemaking into an urban environment. In France, many of the largest Champagne houses whose names we would recognize (such as Veuve Clicquot, Moët, Pommery, Taittinger, and Mumm) have been urban-based enterprises for three hundred years. By contrast, in the US an entire wine tour industry has been created out of siting wineries in the country among the vineyards. This bucolic approach has an undeniable appeal and I am not suggesting there is not a significant value to this rural winery typology, but why couldn't there be another typology as well, inspired by the French Champagne model, and with an emphasis on becoming an active participant in the local community? I strongly felt that the idea deserved exploration.

Terroir in Wine and Architecture (*Genius Loci*)

Phenomenologist Maurice Merleau-Ponty succinctly described his discipline of philosophy as “the study of essences.”⁵⁵ The essence of something is defined as “the intrinsic nature or indispensable quality of something, especially something abstract, that determines its character,” and wine undoubtedly represents the essence of the *terroir* in bottle. In the wine industry, the French word “*terroir*” is a standard term often used when talking about wine. *Terroir* refers to a vineyard or a group of vineyards that belong to a specific region and share the same climate and soil composition. Over the course of the growing season these environmental factors influence the flavor, character, and quality of the grapes, which in turn are reflected in the wine’s specific flavor profile. Undoubtedly a vineyard’s *terroir* is a very important contributor to the way a wine tastes, and it is dependent on its geographical location.

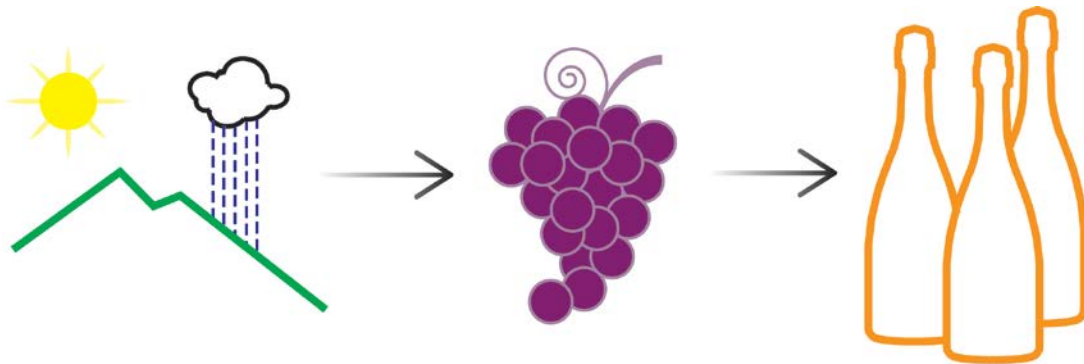


Figure 21. *The terroir influences development of the grapes which ultimately is reflected in the quality and taste of the wine.*

Diagram by Author.

⁵⁵ Maurice Merleau-Ponty, *Phenomenology of Perception*. Translated by Donald A. Landes. (New York, NY: Routledge, 2012), 7.

In architecture, the notion of *terroir* exists as well, but it is generally referred to as the *genius loci*. “Since ancient times the *genius loci*, or ‘spirit of place,’ has been recognized as the concrete reality man has to face and come to terms with in his daily life. Architecture means to visualize the *genius loci*, and the task of the architect is to create meaningful places...”⁵⁶ Drawing parallels to the winemaking process and the *terroir*’s role in shaping the essence of wine, one then asks: What is

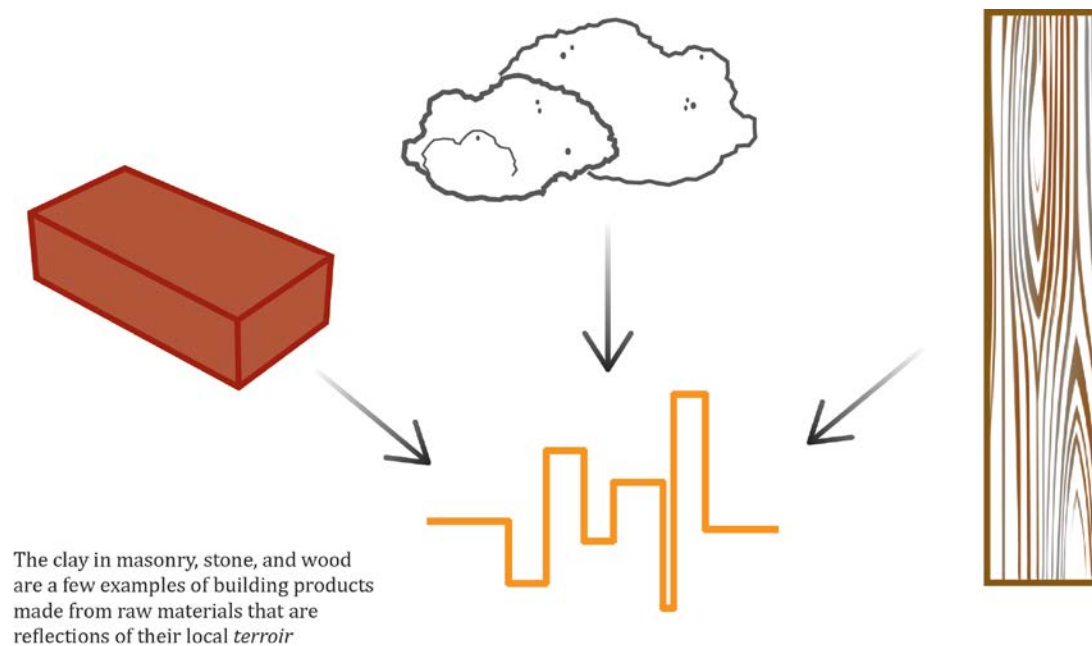


Figure 22. The clay in masonry, stone, and wood are a few examples of building products made from raw materials that are reflections of their local *terroir*.

Diagram by Author

the essence of the place and how does it inform the architecture? Does this mean using local materials in construction, or are there other ways to evoke a place as well?

⁵⁶ Christian Norberg-Schulz, *Genius Loci: Towards a Phenomenological Architecture*. (New York: Rizzoli International Publications, Inc., 1979), 5.

Craft in Wine and Architecture

Craft in winemaking is a manifold process. First and most importantly, Mother Nature crafts the grapes from the *terroir*. It is during this growing stage that the overall quality and character of the wine are determined. After harvest, the winemaker uses his or her skill to enhance the wine's best qualities through the winemaking process. In a good year the winemaker only minimally guides the grapes' natural fermentation process, since the *terroir* has already produced the wine's innate flavor profile. However, the craft of winemaking is an intensely instinctual one, and the connection between the winemaker to the raw unpolished wine must be in sync to result in a premium wine.

Craft in architecture is the art of planning, making, and building. It is a term that is practiced in architecture from the level of the comprehensive parti down to the smallest building detail. In the sense that architects also take raw materials from the earth and shape them through a transformative process, designing a building is similar to winemaking. Like the winemaker, the architect must be skillful in choosing what to emphasize in a particular project's design.

For the purposes of this thesis, the idea of craft also needed to consider historical architecture and its relevance to a contemporary project. More than many other places, Charlottesville is steeped in history and the architectural legacy of Thomas Jefferson. His influential designs were instrumental in shaping the quality of this place, as is evidenced by the ubiquitous adulation he enjoys in his hometown. However, architecture is a product of its age, and no longer are the design aesthetics and construction techniques the way they were when he was practicing his craft. A

new building in Charlottesville must be sensitive to the local precedent, but at the same time, to avoid pat mimickry, it must be an architecture of its time.

Sustainability

Sustainability signifies much more than building with environmentally-friendly materials. Food sustains us, local business sustains the economy, and winemaking sustains a culturally relevant tradition. All of these things together contribute to the creation and sustenance of a community.



Figure 23. Environmental sustainability, the sustenance that food provides, and economic sustainability work together to create a sustainable community

Diagram by Author

Chora

Plato was the first philosopher to write about the creation of the cosmos in his treatise, *Timaeus*. In it he theorized that there were three states of reality: Being,

Becoming, and the Receptacle.⁵⁷ Plato described Being as “the unchanging or invisible,” and Becoming as “the visible or changing.” He then went on to describe a third concept, more ambiguous than the other two, called *Chora*, which was often referred to as the “Receptacle” but literally translated as the word “Space.”⁵⁸ Architectural theorist Perez-Gomez made the argument that this receptacle was “*the space of human creation and participation*, postulating a coincidence between *topos* (natural place) and *chora*, yet naming the latter as a distinct reality to be apprehended in the crossing, in the *chiasma*, of Being and Becoming.”⁵⁹

In winemaking, the crossing of Being and Becoming occurs in the caves, where the sparkling wines undergo second fermentation and gain their effervescence. Architecturally, *Chora* can be expressed by presenting the viewer with moments of surprise that remind people of the chaos in the universe.

⁵⁷ Alberto Perez-Gomez, "The Space of Architecture: Meaning as Presence and Representation." In *Questions of Perception: Phenomenology of Architecture*, by Steven and Juhani Pallasmaa and Alberto Perez-Gomez Holl, 7-25. (Tokyo: a + u Publishing Co., Ltd., 1994), 12-13.

⁵⁸ Donald Zeyl, "Plato's *Timaeus*," *The Stanford Encyclopedia of Philosophy*. March 21, 2012. <http://plato.stanford.edu/archives/spr2012/entries/plato-timaeus> (accessed November 23, 2012).

⁵⁹ Perez-Gomez, "The Space of Architecture," 13.

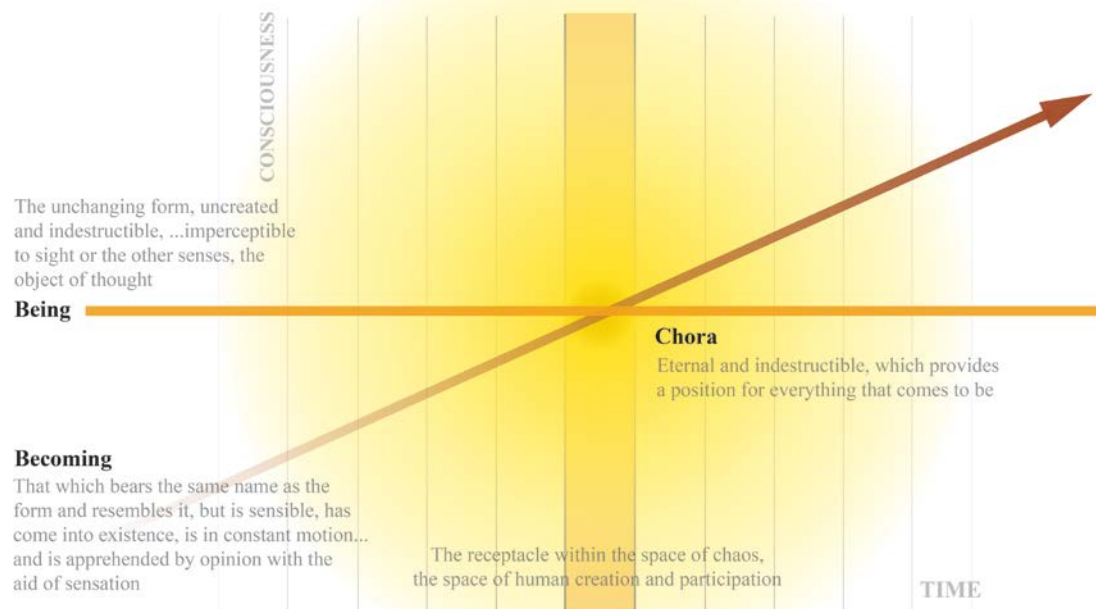


Figure 24. The concept of Chora as the space in the universe where Being and Becoming intersect applies to both sparkling winemaking and architecture.

Image Source: By Author

Chapter 6: Site Analysis

An Introduction to the Piedmont and Charlottesville,

Charlottesville is located in central Virginia in the foothills of the Blue Ridge, approximately 15 miles east of the mountains and 100 miles west of the Chesapeake Bay and Atlantic Ocean. Elevation of the city is at 594 ft. above sea level. Being situated between two such major geographical features helps mitigate climate extremes, resulting in more temperate summers and winters. Average annual rainfall in the area is 44 inches with 200 rainy days spread across the year.⁶⁰ Geologically, Charlottesville is located at the western edge of the Piedmont Plateau, which is the largest physiographic province in the state. The soils in the area are variable, with some soils ideal for farming while others are made up of heavy clay.⁶¹

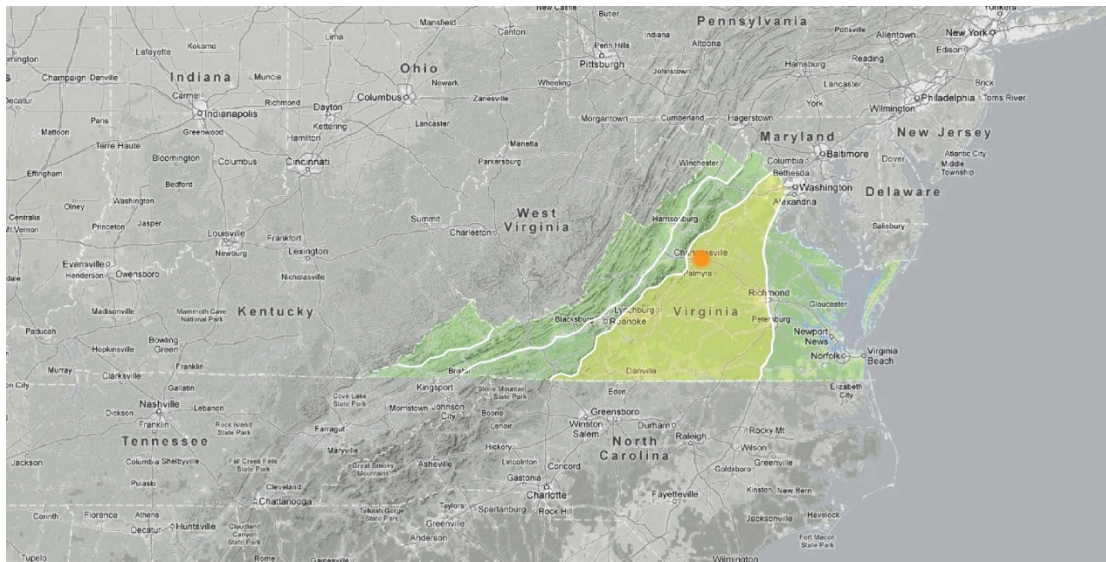


Figure 25. Topographic map of Virginia with the five major geologic regions indicated. The Piedmont is highlighted in yellow, and Charlottesville is represented by the orange dot.

Image source: By Author

⁶⁰ “Charlottesville Weather,” City of Charlottesville, <http://www.charlottesville.org/weather.aspx?page=1996>, (accessed January 20, 2013).

⁶¹ “The Geology of Virginia: Piedmont Province,” William and Mary Department of Geology, <http://web.wm.edu/geology/virginia/provinces/piedmont/piedmont.html>, (accessed January 20, 2013).



Figure 27. Satellite image of Charlottesville and the surrounding area. The topography in and around the city is gently rolling since the city is located in the foothills of the Blue Ridge Mountains, which provide a beautiful backdrop for one of the prettiest cities in the US. Prevailing winds in the region flow in an eastward direction off the mountains. Charlottesville is lightly encircled.

Image source: Base map from Google Earth, edited by Author



Figure 26. Unlike many other early American cities, Charlottesville was not founded on a navigable river, although the (not navigable) Rivanna River is nearby.

Image source: Base map from Google Maps, edited by Author

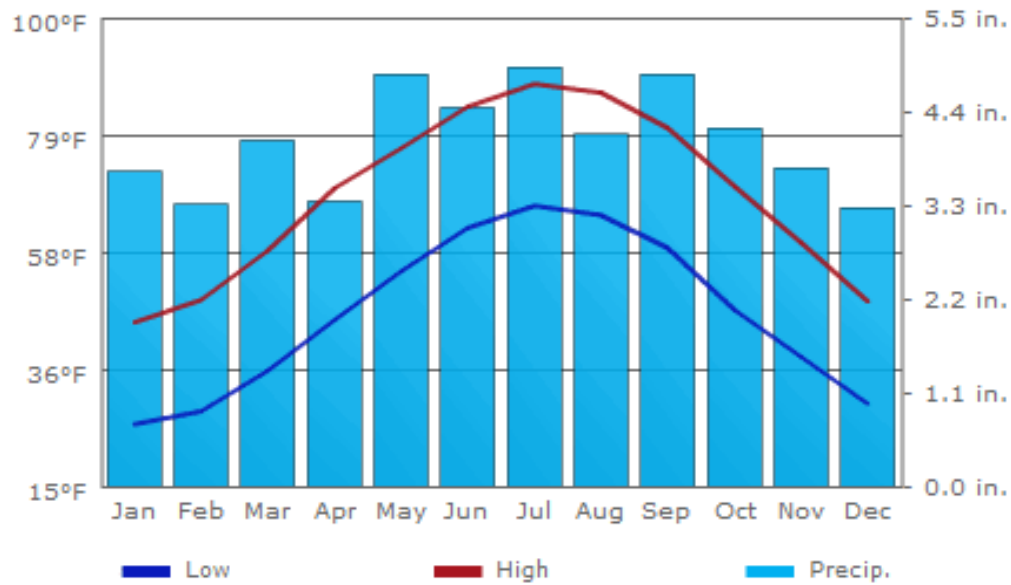


Table 4. Average yearly rainfall in Charlottesville. The high rainfall amounts in the late summer and early fall make Virginia's climate a challenging one for winemakers.

Table source: <http://www.usclimatedata.com/climate.php?location=USVA0143>

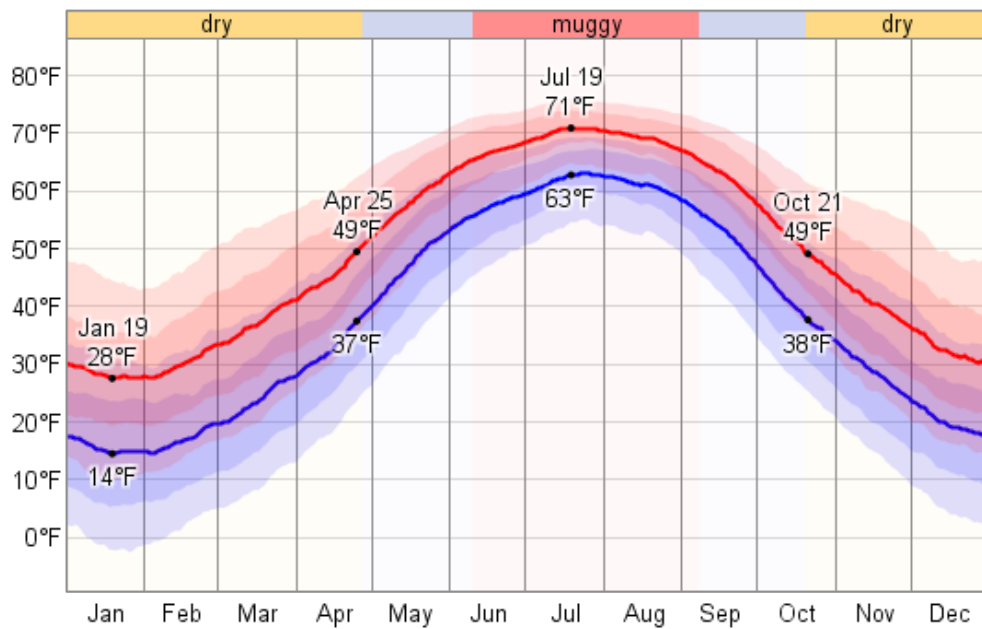


Table 3. Average daily high and low temperatures in Charlottesville.

Table source: <http://weatherspark.com/averages/29903/Charlottesville-Virginia-United-States>

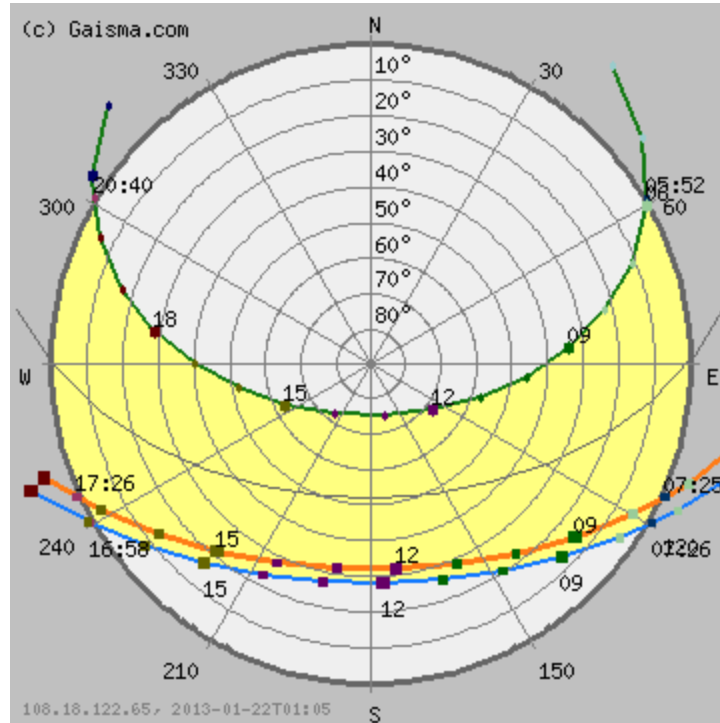


Figure 29. Charlottesville sun path diagram.

Image source: <http://www.gaisma.com/en/location/charlottesville-virginia.html>

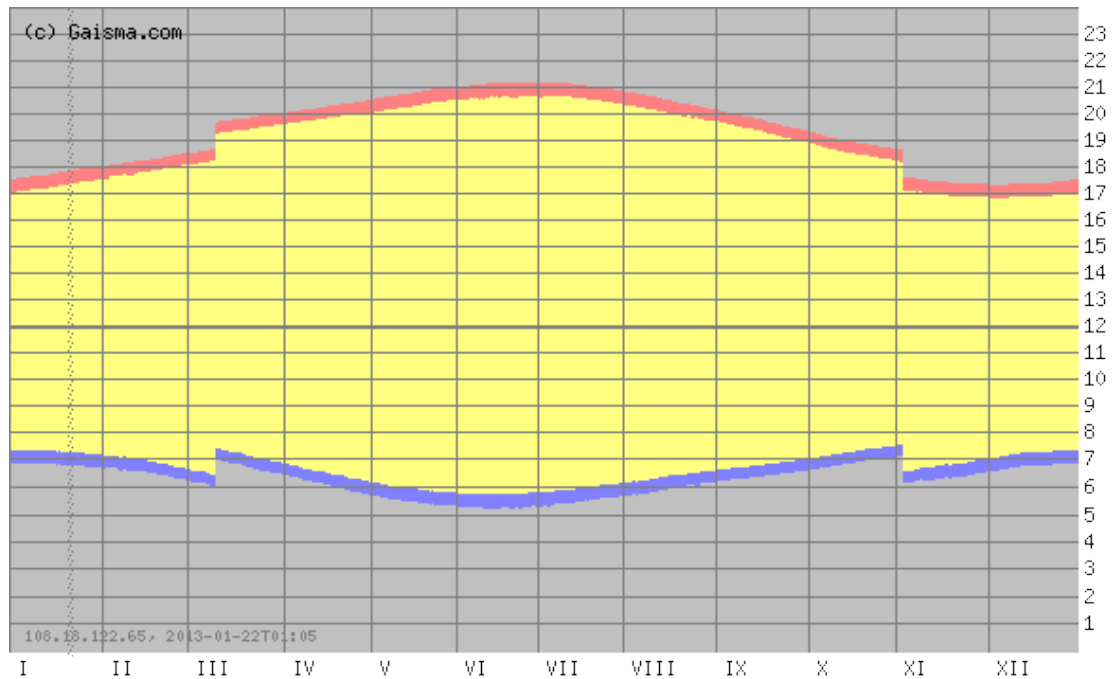


Figure 28. Day vs. night with dawn and dusk in Charlottesville. Gray represents nighttime; Yellow represents daytime; Pink represents dusk; Blue represents dawn.

Image source: <http://www.gaisma.com/en/location/charlottesville-virginia.html>



Figure 32. Rolling hills and picturesque views are ubiquitous in the Piedmont. Farms and wineries like this one dot the beautiful countryside.

Image source: By Author



Figure 31. Monticello

Image source: By Author



Figure 30. Pollak Winery near Charlottesville has beautiful views of the Blue Ridge Mountains even in winter when nothing is growing.

Image source: By Author

The City and the Downtown Mall

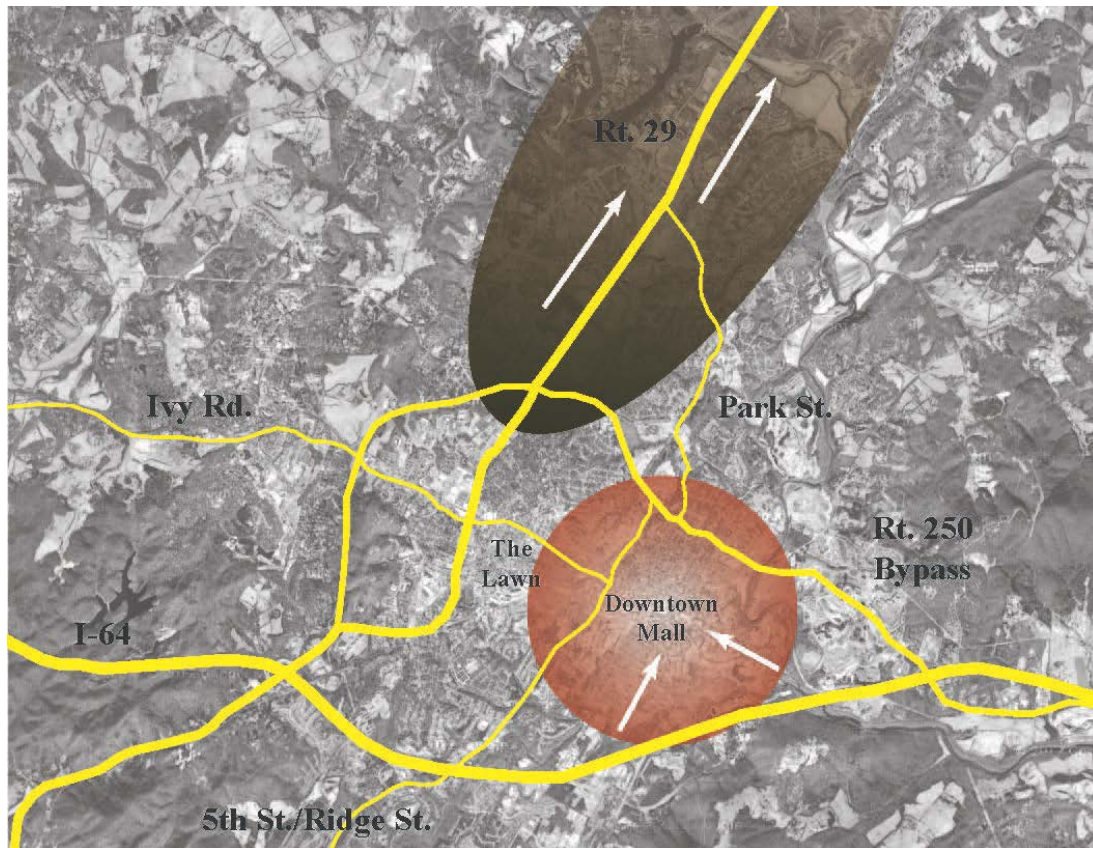


Figure 33. City growth in Charlottesville for the last twenty years (shown in yellow) has mainly developed in a northward direction up Route 29, with the Barracks Road shopping center starting the trend. The past ten years has seen significant effort to revitalize the Downtown Mall (shown in green), and new development is trying to connect back to the Mall.

Image source: By Author

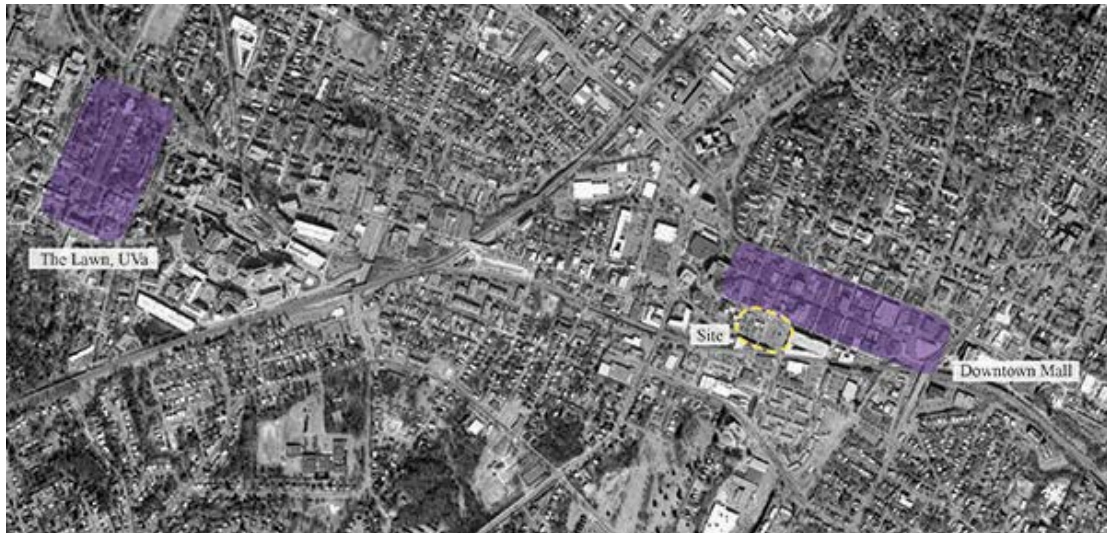


Figure 35. Charlottesville's historic commercial center (right) and the University of Virginia (left) were originally a mile away from each other so the University would not be corrupted by development. Over the next two hundred years the two would grow together.

Image source: By Author



Figure 34. The site is located immediately south of the Downtown Mall. These two blocks are the only undeveloped open space in the vicinity.

Image source: By Author

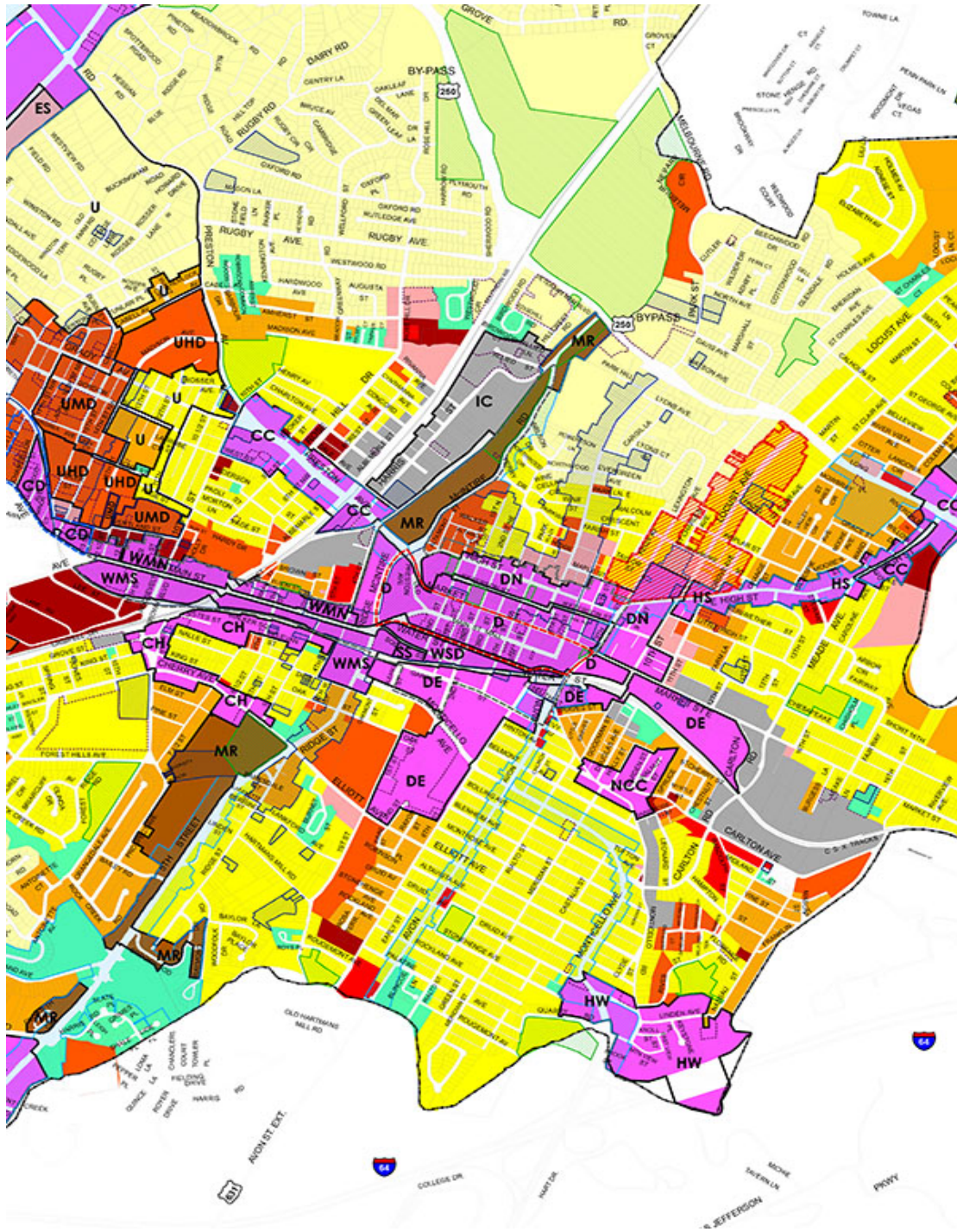


Figure 36. The Downtown Mall is labeled with a “D” for Downtown Corridor. The site is part of the Water Street District Corridor, which is also in an Architectural Design Control District. The fuschia color indicates a mixed-use classification.

Image source: www.charlottesville.org



Figure 38. *The historic architecture of the Downtown Mall has been retained and lends a charming, intimate feel to the pedestrian shopping experience. Until recently any new buildings also mimicked the style of the older buildings to maintain a consistent aesthetic.*

Image source: By Author



Figure 37. *The Charlottesville Transit Center by Wallace Roberts & Todd Architects (WRT) was completed in 2008. It is located at the southeast corner of the Downtown Mall. This LEED Gold project was the first new building on the Downtown Mall to unequivocally separate itself aesthetically from the Neoclassical style. This embracing of a contemporary building in the city indicated a major shift in thinking by city officials. Even though Thomas Jefferson will always be a source of inspiration in Charlottesville, the city very much wants to grow beyond its historic antecedents and expand its appeal.*

Image source: Jeffrey Totaro



Figure 39. *The extent of the Downtown Mall as originally designed by landscape architect Lawrence Halprin*

Image source: By Author



Figure 40. *The pedestrian-only main street*

Image source: By Author



Figure 41. Primary streets surround the Downtown Mall but none go through it.

Image source: By Author

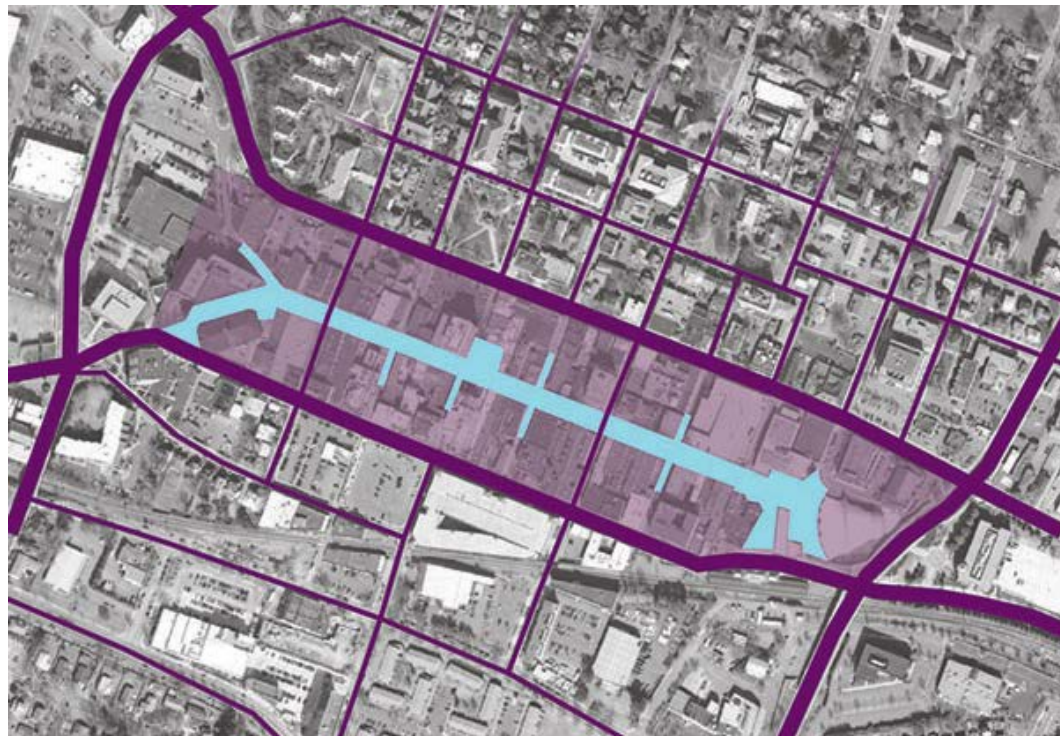


Figure 42. Secondary streets generally terminate at the primary roads that encircle the Downtown Mall. Two streets do allow cross-Mall access, but the flow of vehicular and pedestrian traffic at those points is awkward.

Image source: By Author

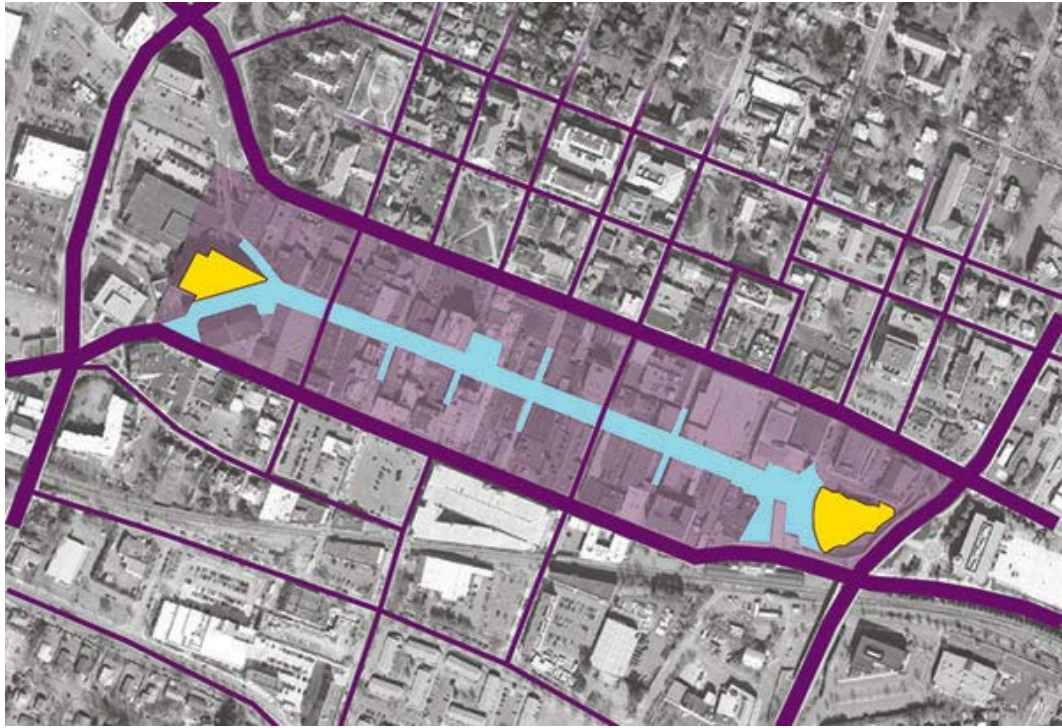


Figure 44. The west and east ends of the Downtown Mall are terminated by the Omni Hotel and nTelos Pavilion (respectively). These two structures are the most recognizable landmarks on the Mall.

Image source: By Author



Figure 43. A number of secondary landmarks are sprinkled both on and around the Mall.

Image source: By Author

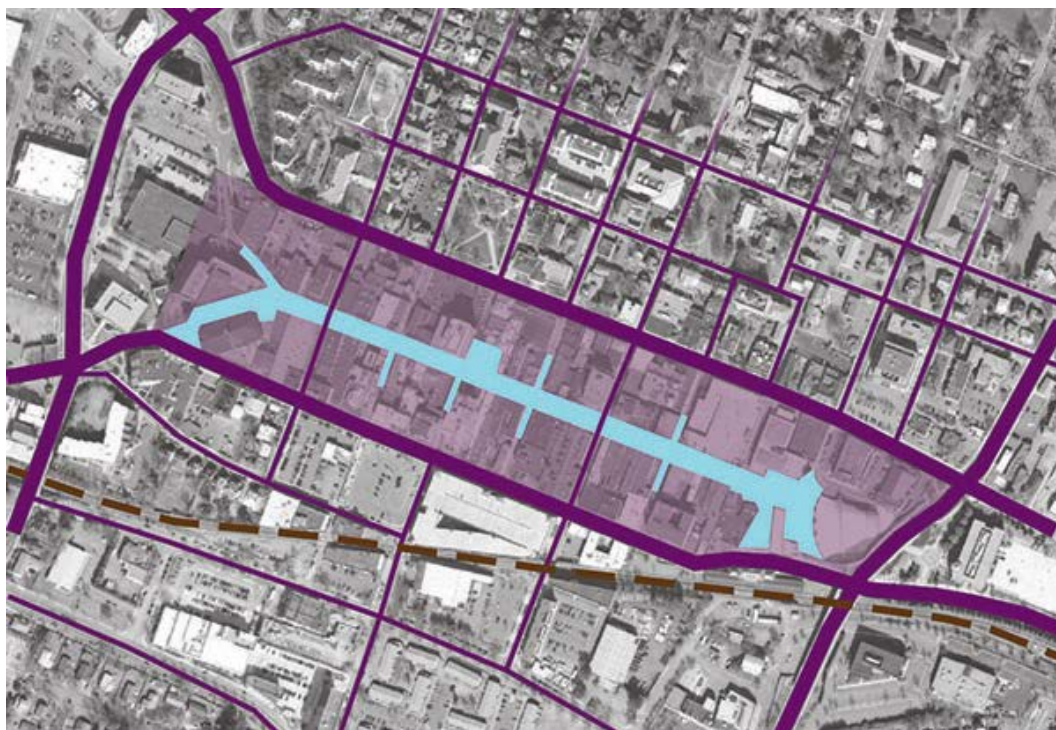


Figure 45. The railroad tracks run along the south end of the Mall and separate the downtown from new development that is occurring further south.

Image source: By Author

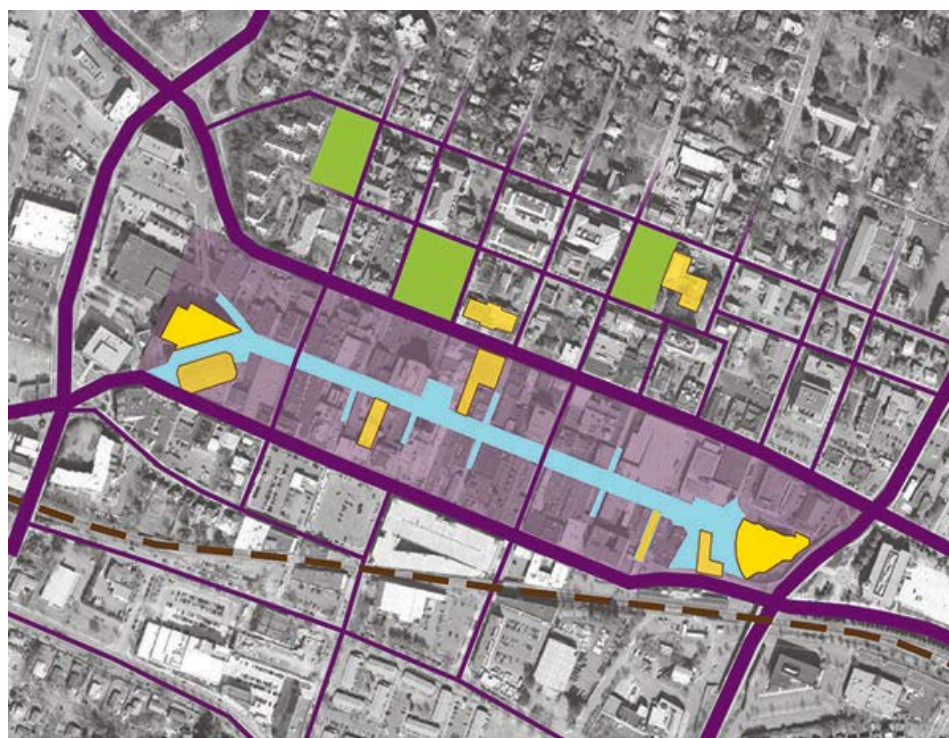


Figure 46. Three parks are situated to the north of the Mall and are appreciated as public amenities, while nothing similar exists to the south. Layering all the diagrams reveals how all the downtown amenities not on the Mall are located north of it, with nothing to distinguish the south side at all.

Image source: By Author



Figure 47. While the Downtown Mall is a very popular public amenity in Charlottesville, its pedestrianized central street effectively isolate the Mall from the rest of the city. As a result, the Mall is encircled by vehicular streets that act as boundaries and the Mall becomes a little insular oasis. The two bisecting streets allow minimal cross-Mall access and the integration of cars and pedestrians is an awkward jumble.

Image source: By Author

The Site

The site is located one block south of the Downtown Mall, bounded on the north and south by Water Street SW and South Street W (respectively), and on the west and east by 2nd Street SW and 2nd Street SE (respectively). The total area of the site is 1.98 acres.



Figure 49. Site plan with dimensions and street labels.

Image source: By Author



Figure 48. Looking at the site from Downtown Mall approach.

Image source: By Author



Figure 51. Looking at the site from the NW corner. This is the direction most vehicular traffic will come from, so this will be the first view visitors have of the site. From this vantage point it is easy to understand the approximately 10'-0" topography change across the site.

Image source: Google Maps



Figure 50. Looking at the site from the NE corner. After parking in the parking garage, visitors arriving by car will walk towards the project from this direction.

Image source: Google Maps



Figure 52. Looking at the site from the SE corner. The Downtown Mall is in the background.

Image source: Google Maps



Figure 53. Looking at the site from the SW corner. These two surface parking lots are the last undeveloped land around the Downtown Mall.

Image source: Google Maps

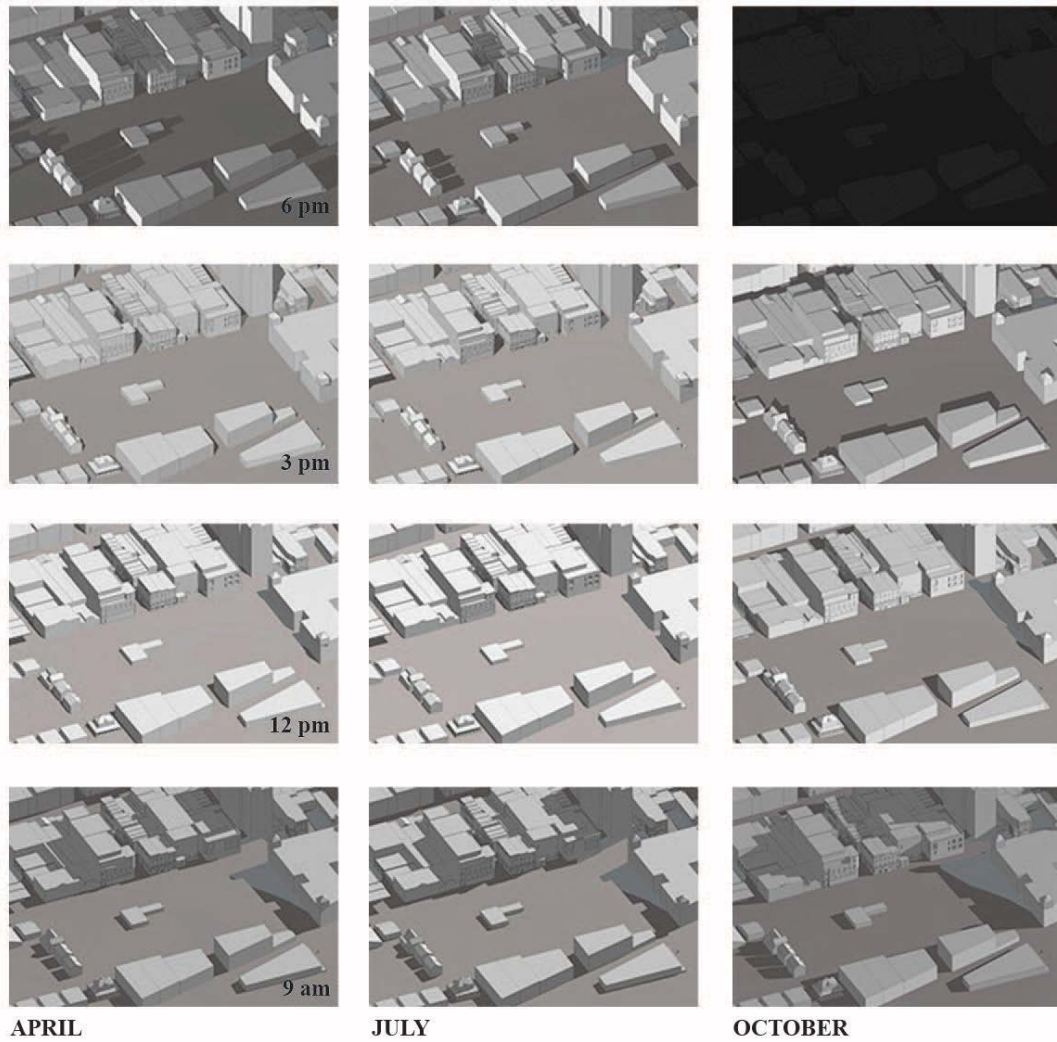


Figure 54. Comparative sun study diagrams on the site at 9 am, 12 noon, 3 pm, and 6 pm. Left column is in April; Center column is in July; Right column is in October

Image by Author

Chapter 7: Precedents

Virginia has an immensely rich architectural history, and in looking to design a project that would be true to the *terroir* of Charlottesville, analyzing the local architecture precedents seemed an ideal solution for inspiration. I was not interested in blindly mimicking the red brick/white column/Palladian window motifs so prevalent in the area, but I was very much interested in finding lessons among the building techniques and partis that I might implement in a more abstract way. As part of the precedent analysis exercise, I looked at construction means and methods over time, grouped by material: wood; brick; and stone.

Wood

The first years of Virginia's history were dominated by wood buildings. These were often rustic dwellings measuring 16'-0" x 16'-0" or 16'-0" x 20'-0" and laid out proportionally using the golden section. Chinking filled in the gaps between logs, which was made up of split wood, stones, or small branches inserted between logs that was then plastered with a mud, animal hair, and straw mixture.⁶² Roofs were pitched to create loft space above the main level, and a stone fireplace at one or both gable ends of the building ensured the cabin's residents could cook and have heat. As time went on and kitchens were added, they were usually in a separate, shed-roof covered room behind the fireplace that helped to reduce the threat of fire.⁶³

⁶² K. Edward Lay. *The Architecture of Jefferson Country: Charlottesville and Albemarle County, Virginia*. (Charlottesville, VA: The University Press of Virginia, 2000), 31.

⁶³ Lay, *The Architecture of Jefferson County*, 32.



Figure 56. Early 18th/19th Century Virginia log house with kitchen at back and stone fireplace at front. Notice the top of the chimney is made of brick, which was easier to repair and hoist than stone. These houses were built on stacks of stone located at the corners of the building to allow air flow at the base of the walls. Weather boards were often veneered over the logs to protect them from the elements. The interior may have been painted white, and the floor was packed earth.

Image source: Lay, 32



Figure 55. Early log houses were often built using golden section proportions. This may have been an accident of nature rather than a purposeful design decision by builders.

Image source: Lay, 33



Figure 57. *Log house drawings for a house of a similar style to the photo on previous page. This early form of American building was derived from simple shapes and had strong horizontal banding due to the stacked logs.*

Image source: Garvin, 6



Figure 58. *Detail, heavy wood timbers with partial weather board sheathing. This type of wood construction was typical in the 18th Century.*

Image source: Garvin, 7



Figure 60. *Plank house construction, more typically found in New England, but also elsewhere. This diagram shows the solid wood wall construction that had evolved by the early 19th Century. Similar in spirit to earlier log houses but much more refined.*

Image source: Garvin, 22



Figure 59. *Two variations of a stacked board wall construction. These kinds of walls are usually covered with clapboards or shingles, but sometimes were left exposed and painted to look like brick.*

Image source: Garvin, 23

Figure 62. *Wall section of a similar style wood framed residence showing construction details.*

Image source: Ford, 136



Figure 61. *A homestead-style house in Charlottesville. Houses in this style were popular after the Civil War. They typically had an L-shaped plan and a wide side-entrance porch, and these kinds of houses became the farmhouse or suburban prototype until the 1920s.*

Image source: Lay, 265



Figure 63. *Modern platform framing, which is still used for construction today. It is similar to balloon framing, but rather than continuous studs the building is built one floor at a time. Walls are constructed on the sub-floor of their associated level.*

Image source: <http://2ndyr.files.wordpress.com/2011/10/platform-frame-graphic-standards1.pdf>

Brick

By the time Thomas Jefferson began building Monticello, he felt that wood buildings had a lifespan of fifty years, while brick buildings were “an actual and permanent acquisition to the state, adding to its value as well as to its ornament.”⁶⁴ However, this mentality differed from his contemporaries, as wood was cheaper and easier to procure than brick.⁶⁵ So while nearly everyone else was building wood frame homes, Jefferson was one of the few constructing his of brick, at both Monticello and University of Virginia. Shortly after Jefferson’s time, brick became the preferred building material in Albemarle County, and the Neoclassical style is still popular locally.

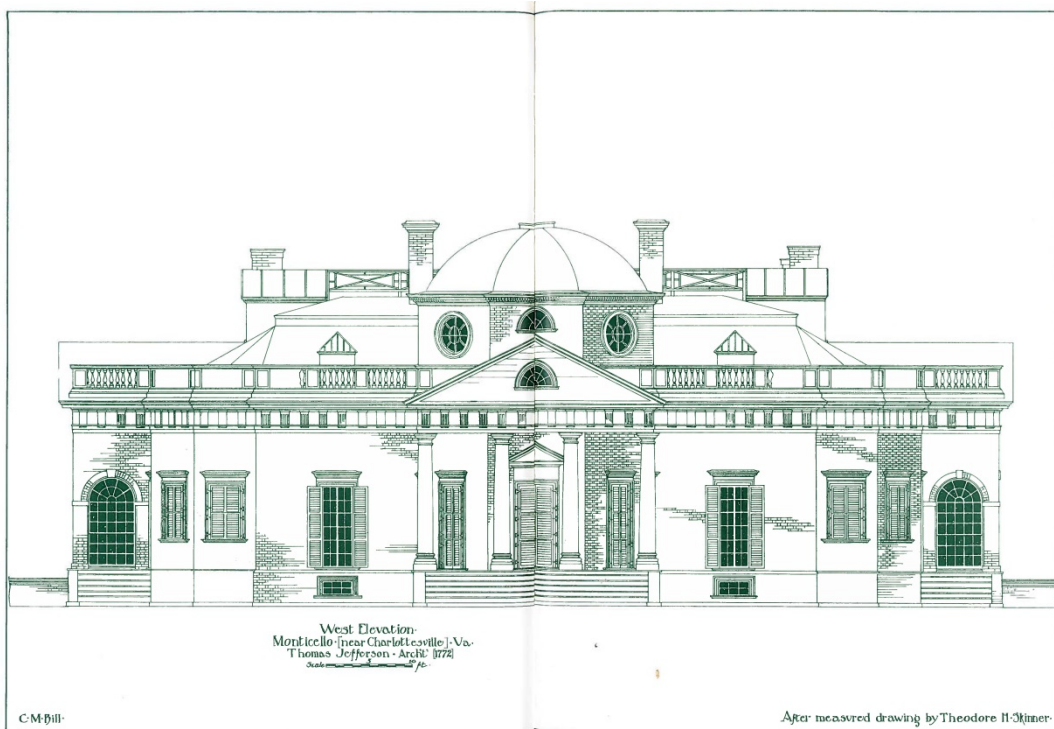


Figure 64. Elevation drawing of Monticello, begun in 1769 and completed in 1809. The exterior of the building is solid brick with limestone mortar. They vary in width from 13.5: at the northeast front to 27” thick in the parlor side walls.

Image source: Mullins, ed, 174

⁶⁴ Lay, *The Architecture of Jefferson County*, 37.

⁶⁵ *Ibid.*

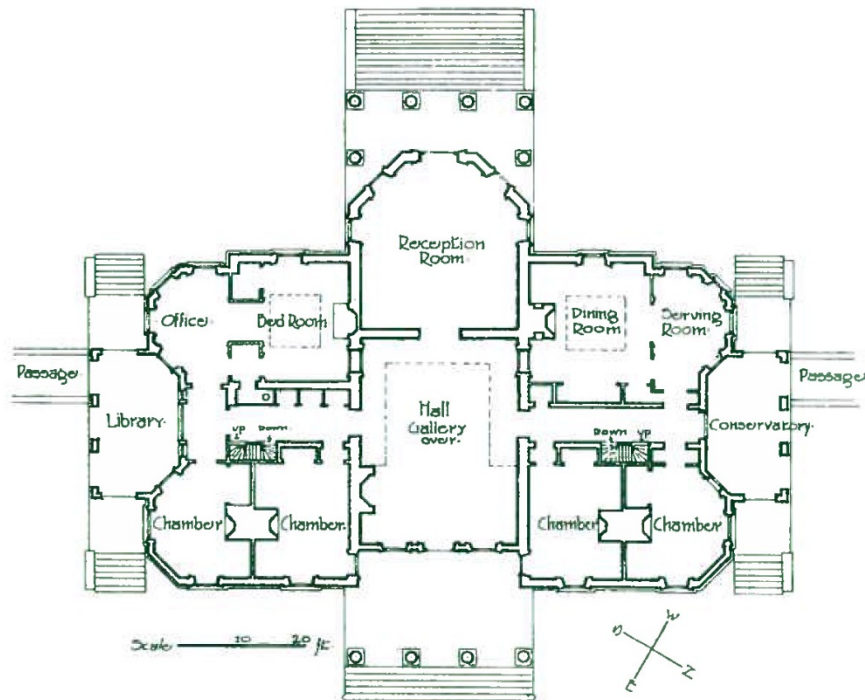


Figure 65. Plan drawing of Monticello.

Image source: Mullins, ed, 176



Figure 66. Monticello in its setting is a beautiful work of American architecture.

Image source: Chenoweth, 89

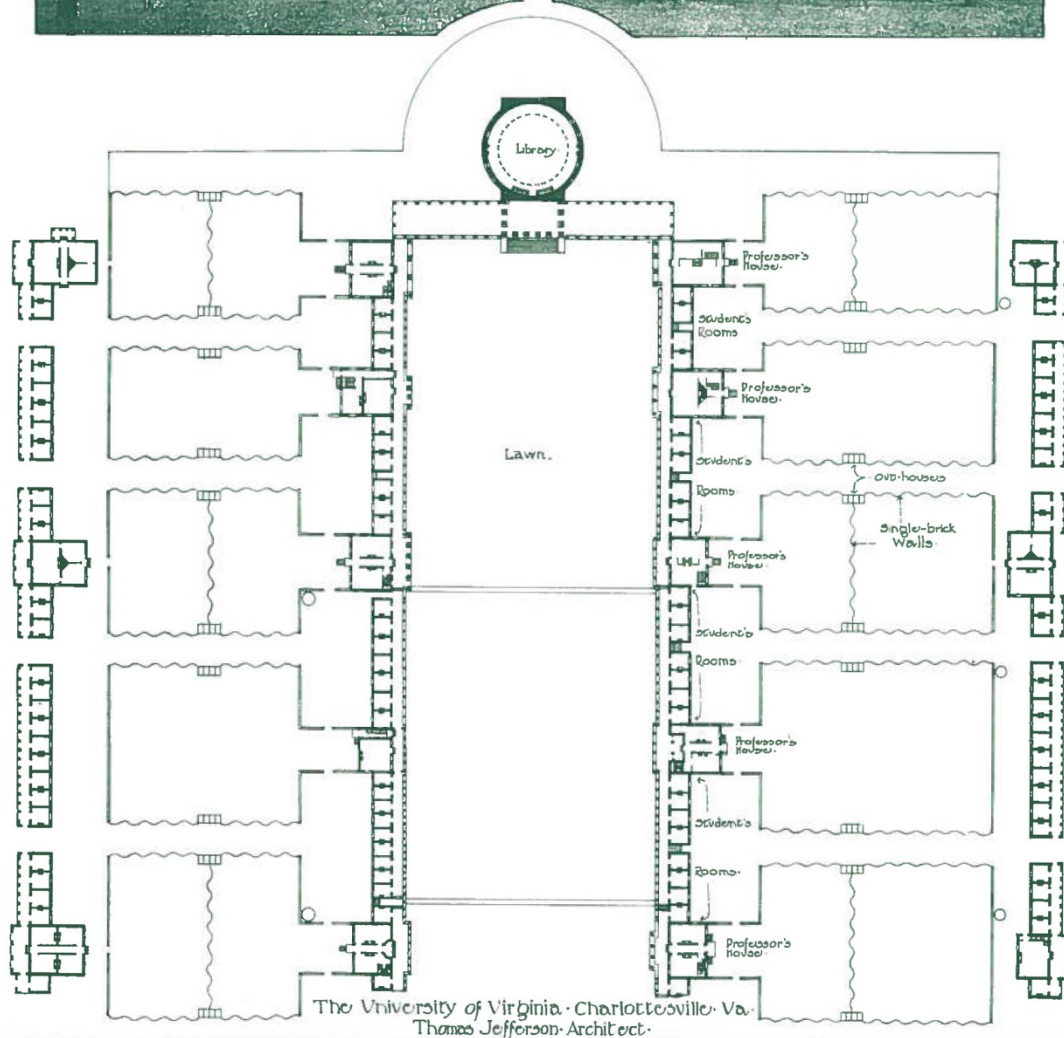


Figure 67. *The University of Virginia. The north end of the Lawn is capped by the Rotunda, which was the University's Library. The pavilions were classrooms and professor apartments. Each of the ten original pavilions was different, but the campus was linked by the continuous arcade that lined the Lawn.*

Image source: Mullins, ed, 166

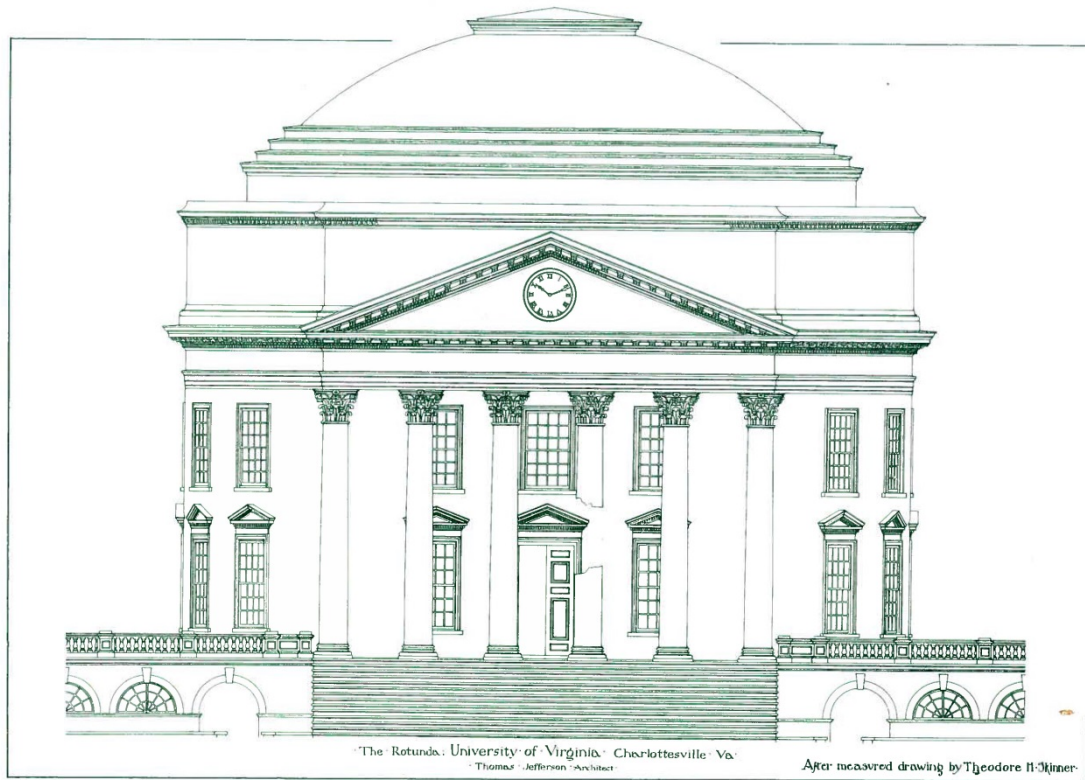


Figure 69. The Rotunda was designed to be UVA's library. Representing a temple to learning, it was constructed of solid brick, with plastered columns and marble accents. It is modeled after the Pantheon in Rome, and in fact is an exact 1/2 scale replica.

Image source: Mullins, ed, 170



Figure 68. Typical brick foundation that would have been built at Monticello and UVA.

Image source: Garvin, 42

Figure 70. *Wall section of a contemporary brick residence showing probable wall construction.*

Image source: Ford, 162



Figure 71. *The Marshall-Rucker house in Charlottesville was built in 1894.*

Image source: Lay, color plate



Figure 72. *The Barry and Bill Battle Building at UVA Children's Hospital is a recently completed project in Charlottesville that is constructed with brick veneer, the most common choice for brick construction in modern times.*

Image source: <http://www.odell.com/portfolio/category/heal/>

Stone

Stone was not a common building material in Charlottesville, most likely because once brick manufacturing began in earnest it was easy to procure and less expensive than stone. Very few residences were built of stone, although they may have had stone basements. Charlottesville was not completely devoid of stone, however, and it was used for structures such as bridges and mills. Even today it is a challenge to find any stone buildings, most likely because now brick as a building material is so ingrained in the local architecture that stone simply cannot find a market. However, it still invites investigation on the basis of its use as a foundation material. Since there will be a large program element underground, might it still make sense to turn to stone as an option?



Figure 73. *Two types of stone foundations used in early American architecture. For below-ground structures, stone offers protection from moisture that other materials do not have.*

Image source: Garvin, 42-43

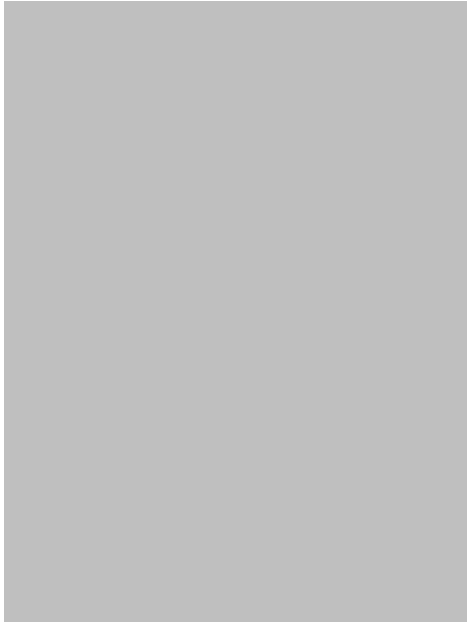


Figure 74. *Diagram of historical stone foundation.*

Image source: Lanier, 64

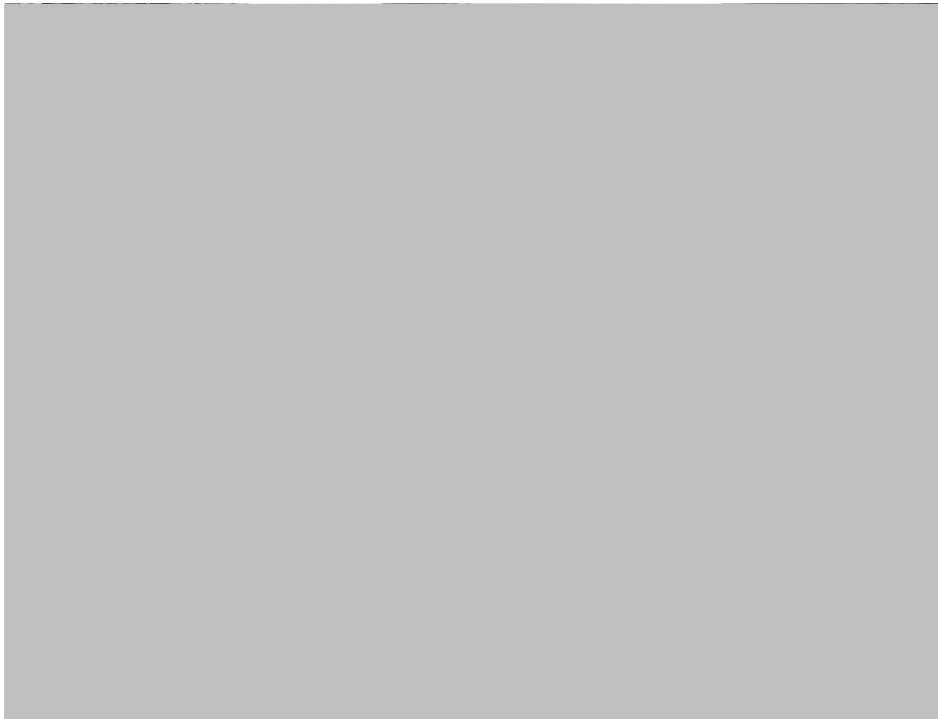


Figure 75. *Tsuquatantia millhouse, built in 1792, is one of the few all stone buildings in Albemarle County.*

Image source: Lay, 82



Figure 77. Samuel Dyer's mill from c. 1790 is stone, but only at the base where there is fear of water damage.

Image source: Lay, 82



Figure 76. A stone bridge off I-64 near Charlottesville is an example of the use of stone for infrastructure.

Image source: <http://img.groundspeak.com/waymarking/display/581b55a2-b386-4c40-8e4d-5aa3357d71cb.JPG>

Chapter 8: The Program & Technical Considerations

Tasting Stars In The Piedmont:
Initial Program Movement Analysis

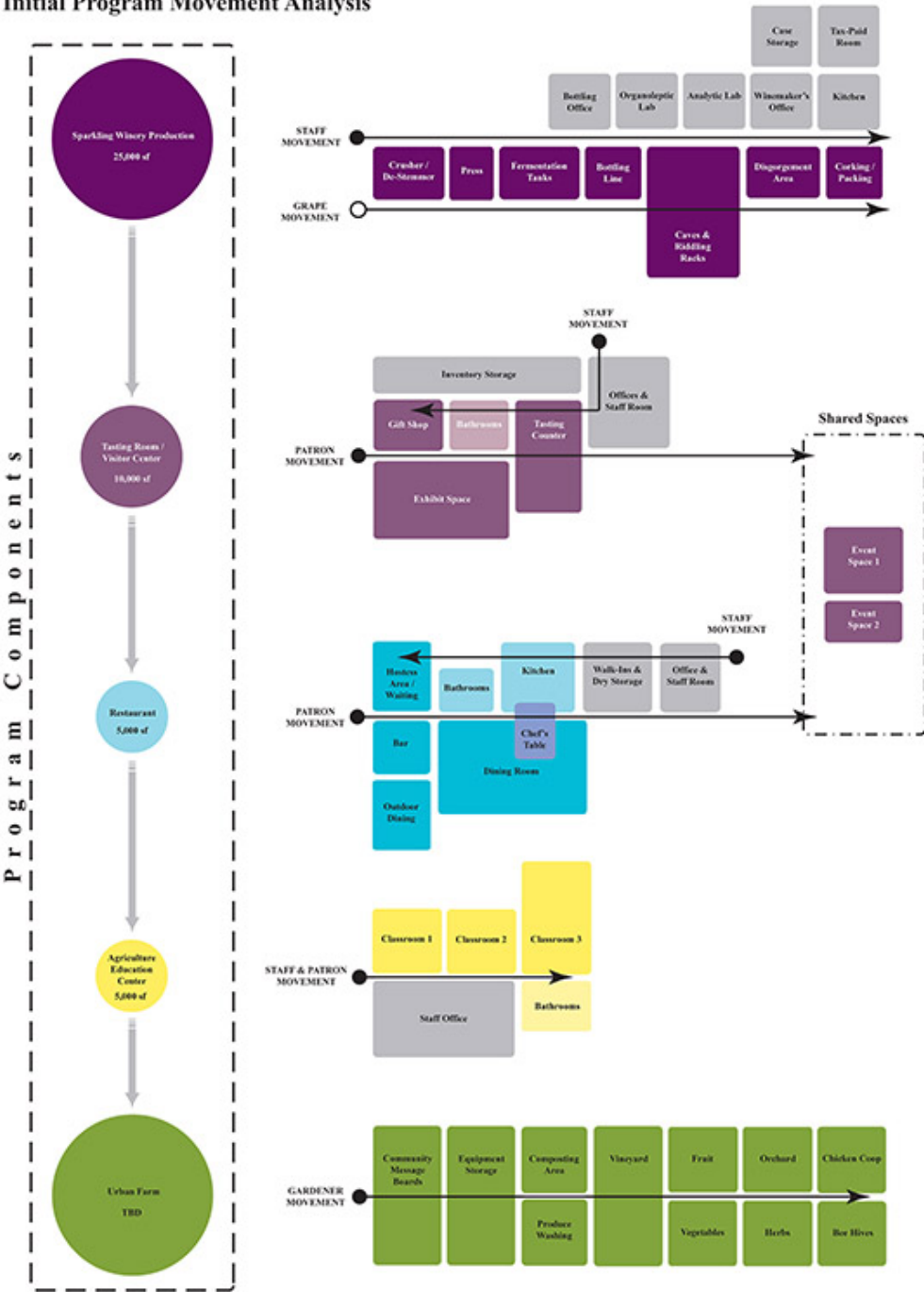


Figure 78. Initial program flow diagram studying how visitors move through each program component.
Image by Author

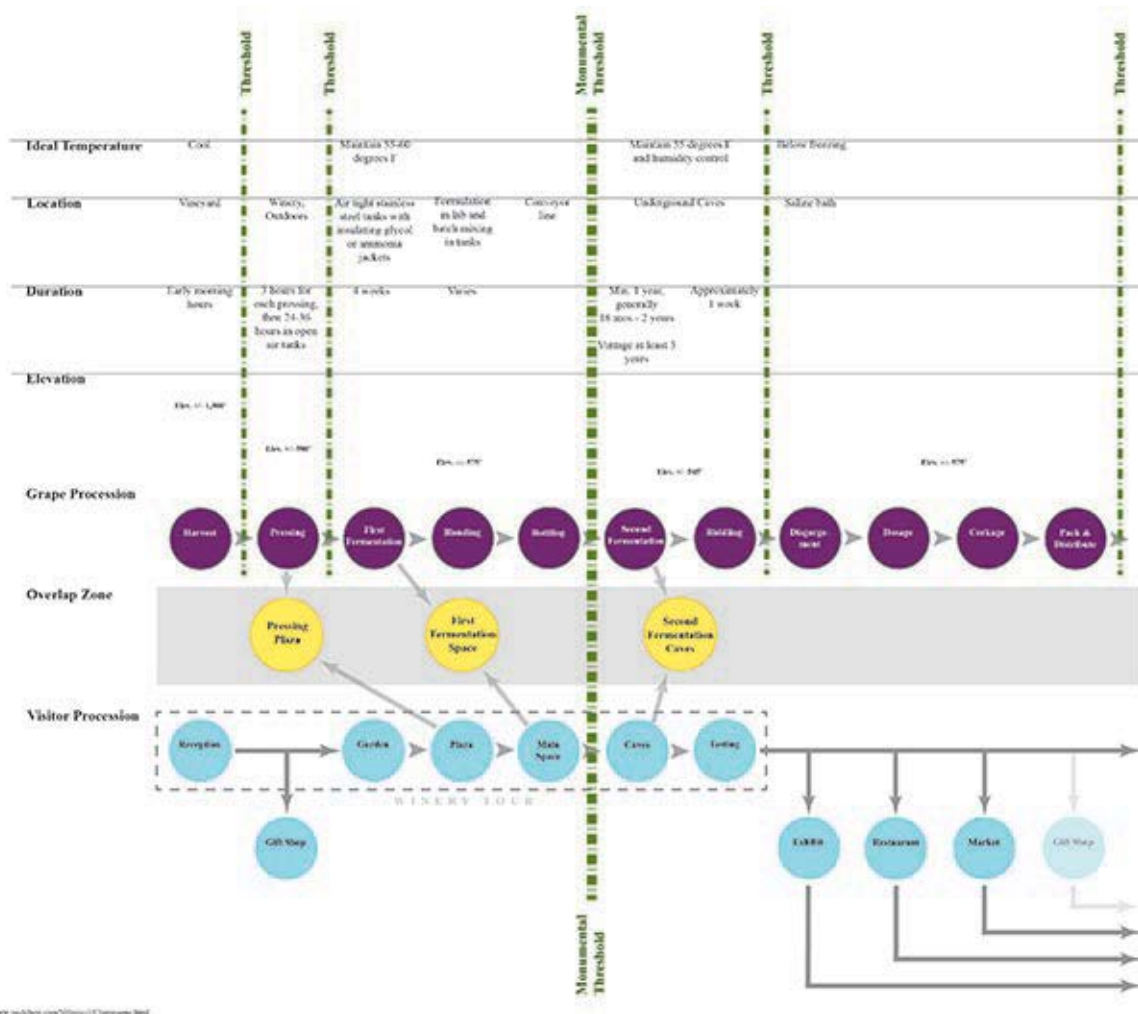


Figure 79. Procession vs. function diagram studying interception points at major thresholds.

Image by Author

Site Requirements

- Close to the Downtown Mall, which serves as the commercial center of the city
- Easy truck access for grape delivery (for winery)
- Easy vendor access and set-up (for market)
- Vehicular access and parking for visitors not located within walking distance of the Market District

- Good pedestrian access from the Mall
- Access to public transit
- Good visibility to attract visitors
- Access to sunlight for growing plants

Preliminary Program Elements

Sparkling Winery Production.....35,000 sf

- Grape Press (can be outdoors but covered)
- Fermentation Room
- Bottling Area
- Secondary Fermentation Room w/ Riddling Racks
- Disgorgement Area
- Corking/Packing Area
- Lab
- Staff Bathrooms
- Case Storage
- BOH Administrative Offices
- Winemaker's Office
- Bottling Office
- Kitchen
- Tasting Counter
- Gift Shop
- Inventory Storage

- Visitor Bathrooms
- Exhibit Space
- Event Space

Caves.....*TBD*

Agriculture Education Center.....5,000 sf

- Classrooms (3)
- Staff Office
- Bathrooms

Urban Farm.....*TBD*

- Growing Area(s) – Indoor and Outdoor
 - Herbs
 - Vegetables
 - Fruit
 - Vineyard
 - Orchard

- Equipment Storage
- Composting Area
- Produce Washing Area
- Community Message Boards

Restaurant.....5,000 sf

- Hostess Area/Waiting
- Dining Room
- Outdoor Dining Area

- Demonstration Kitchen/Chef's Table
- Kitchen
 - Receiving
 - Meat Prep
 - Vegetable Prep
 - Walk-In Refrigerator
 - Dry Storage
 - Hot Line
 - Cold Line
 - Expediting Area
 - Beverage Station
 - Dishwashing
 - Bathrooms
 - Manager's Office
 - Bathrooms
 - Equipment Storage

Farmer's Market (adjacent site)

Special Technical Considerations

As has been discussed previously, the process of making sparkling wine is unique and requires special equipment, has special spatial requirements, and also requires special environmental control systems to keep the wine in its ideal conditions. The most important factor is controlling the temperature. In the

fermentation tanks the temperature is controlled by the tanks themselves, but in the caves the bottles are open to the air so the entire room must be kept at 55 degrees. Humidity in the caves must also be monitored so it is kept at approximately 70%. This means moisture and mold control will be important considerations for these spaces. In France the caves have existing in their current form since originally excavated by the Romans, which creates an amazing ambiance, but there is significant mold growth. This occurrence is not acceptable for an institution in the United States, so there must be artificial regulation.

Chapter 9: Design Goals & Approach

The City Market's Identity Crisis

Every Saturday morning from April to December, an open parking lot just south of the Downtown Mall transforms into the Charlottesville City Market. Thousands of Charlottesville residents crowd to the lot on market days to purchase a wide range of goods from the nearly 150 vendors ranging from crafts, to meats, to cheeses, to honey, to all kinds of produce. In the height of the summer season it can be difficult to move through the market stalls due to the number of shoppers. However, outside of the regular market hours, the market site is simply an empty expanse of paving, with only a painted sign indicating the lot serves any other purpose besides parking.

For close to a decade the city has been studying how a permanent market might replace the ad hoc arrangement that currently exists at the City Market site and the adjacent parking lot. In 2007 a design competition was held to study potential solutions for a new mixed-use development, but despite a number of innovative award-winning submissions by firms such as Little, James Huemoeller + David Malda, and Speranza Architecture, none of the design solutions were ever implemented.⁶⁶

⁶⁶ David McNair, *The Hook*. October 5, 2007. <http://www.readthehook.com/76740/water-street-design-contest-winners> (accessed November 19, 2012).



Figure 80. *The Charlottesville City Market in operation on a Saturday morning. Vendors are arranged cheek by jowl in rows across the entire parking lot and thousands of visitors wend their way along the rows buying local produce, meats, baked goods, and crafts.*

Image source: By author



Figure 81. *The City Market site when the market is not operational. There is no indication that the site has a purpose other than parking.*

Image source: By Author

The Market District, Conceived

The concept of the Market District grew from Charlottesville's city council members hoping to accomplish more than simply creating a permanent City Market structure. The two surface parking lots, the only undeveloped land left in the direct vicinity of the Downtown Mall, have the potential to create something bigger: a compelling and vibrant urban center whose primary functions could reach people on a variety of levels.

1. To educate people of all ages and socio-economic backgrounds about how to embrace healthy and sustainable living, and
2. To support local farmers and individual entrepreneurs
3. To provide an opportunity for city residents to better understand the long history and culture of winemaking
4. To educate visitors about the unique *terroir* of Charlottesville and the Piedmont region

With all the program elements operating under a cooperative philosophy, the Market District would provide a common ground for the rituals of food, wine, and shopping to bring people of different means and backgrounds together in a meaningful way. The new development would also support the city's economic, cultural, and environmental sustainability in a deeper, more holistic approach than any of these categories on their own.

Architecture an an Expression of the Terroir

In the words of Dave McIntyre, the Washington Post wine columnist, “It’s time for Virginia to get over Thomas Jefferson.”⁶⁷ Obviously it would be impossible to abandon Thomas Jefferson altogether as he is perhaps the biggest contributor to the perception of Virginia, but it is time to stop blindly borrowing the Jeffersonian architectural details in a cheap attempt to recreate a historical style. This mimicry results in meaningless architecture. In Charlottesville, brick masonry has been the default construction material for all civic and institutional buildings since Thomas Jefferson used it at both Monticello and the University of Virginia. However, rarely has brick been employed for any reason other than superficially mimicking the status quo. The design intention of this thesis is to re-examine the potential of masonry as a construction material and experiment with its ability to embody the *genius loci* in addition to embracing the *chora*, or space, of the winery and its environment. By progressing beyond the simple, generically-appealing aesthetic qualities of brick masonry and delving more deeply into its intrinsic properties it is possible to create a phenomenological architectural experience that is expressed in other ways.

After studying the local architecture precedents I was inspired by the vernacular material textures and patterns. I was interested in expressing the *terroir* abstractly, and not relying on the red brick with white column motif so prevalent in the city. Formally, I wanted to make the architecture a reflection of the winemaking craft. Even though wine can be extremely complex on the palate, in reality it is a

⁶⁷ Leahy, *Beyond Jefferson's Vines*, Foreward VII.

very simple product with minimal ingredients. It embodies the essence of the *terroir*. Therefore the architecture, too, should be simplified to the essence.

Every design student learns early in the education process that the point, line, and plane are the most basic building blocks of the craft of architecture. Operating under this assumption, I was interested in creating a planar architecture from simple materials and using simple forms.

Sustainability and Sustenance

This project interprets sustainability as bigger and more intrinsic than simply following the LEED checklist. The Market District is based on ideas of more holistic sustainable living that touches all aspects of our lives: gastronomic, economic, and of course environmental.

At the beginning of my site exploration, I made a diagram of the vendor locations that are registered as participants of the City Market. Most of them travel to Charlottesville from less than an hour away and easily fall within the 100-mile radius encouraged by the locavore philosophy. It is easy to understand how proposing a more permanent structure for the City Market could make a big difference to the local economy. If some of the vendors had the opportunity to have permanent stalls the additional revenue generated would benefit local, small business owners. This factor supports a larger understanding of sustainability that transcends the architecture.

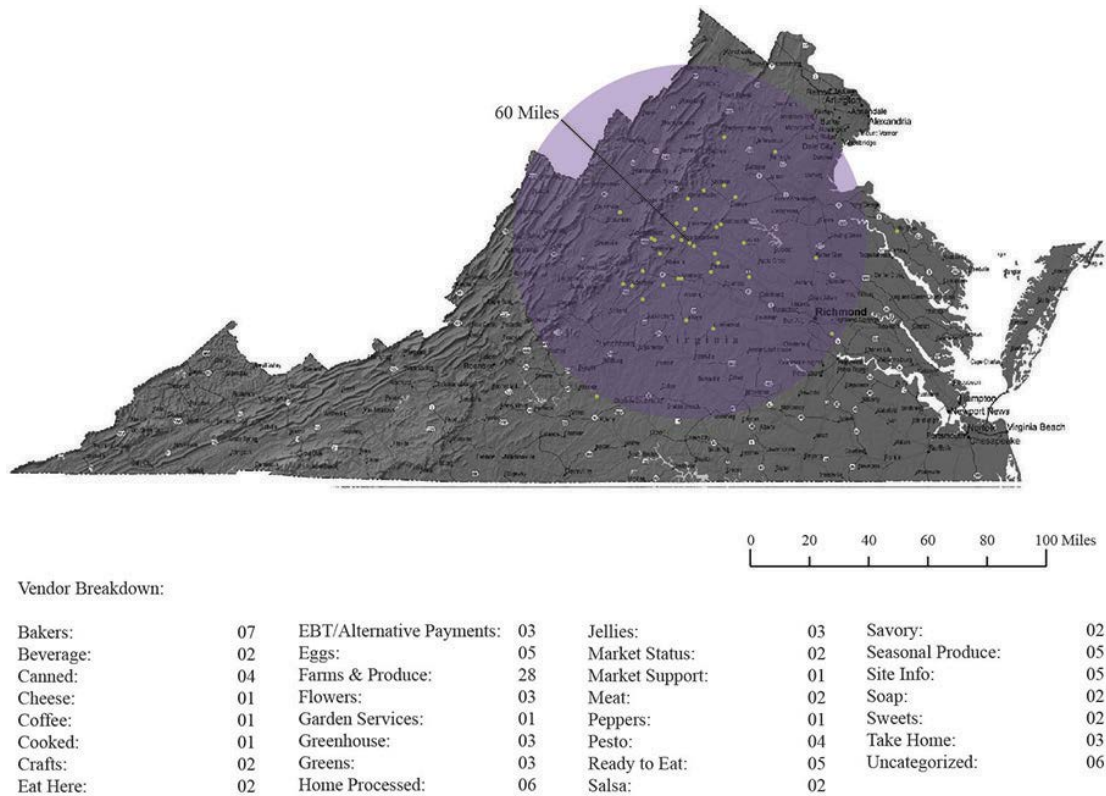


Figure 82. Vendors at Charlottesville’s City Market are almost entirely local farmers and entrepreneurs. Buying groceries from the City Market not only supports the local economy, but also promotes sustainability and a stronger sense of community. More importantly, people are able to buy fresh, perfectly ripe fruits and vegetables that provide more nutrition, taste better, and result in better health.

Image source: By Author

Opening the Mall and Knitting the Community Together

Charlottesville’s Downtown Mall is a popular destination for both city residents and tourists. The nine-block district draws huge crowds of shoppers and diners year-round, but the Mall is undeniably insular, with little connection to the neighborhoods beyond its boundaries. The new Market District will provide a better flow of people from the center of the Mall out into the neighborhood and beyond to the new restaurants, apartments, luxury fitness center, and museums south of the railroad tracks.

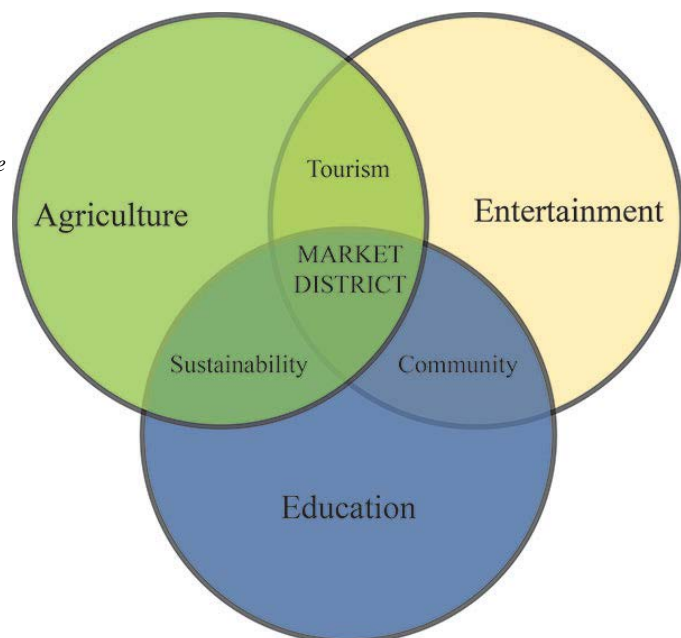


Figure 83. The Downtown Mall is a long-established city amenity and destination for both residents and tourists. South of the railroad tracks new developments are being built but thus far have not successfully linked themselves to the Mall. This project will be located in the dead space between the two and will serve to provide the missing link functionally and physically.

Image source: By Author

Figure 84. The ultimate design goal for the larger Market District as well as the winery and agriculture center is to provide a multi-faceted community amenity that holistically supports a sustainable lifestyle while encouraging visitors to find a connection to the essence of the earth.

Image source: By Author



Chapter 10: Initial Schemes & Development

Scheme 01, Terracing into and through



Figure 85. A gently terraced hardscape feature draws people from 1st Street into the site and directly onto the crush pad. When grapes are delivered to the site in the fall, the winemaking process will be the central focus of the open plaza, and the juice can flow via gravity down into the fermentation tanks below. The open space also provides area for vendors to set up the City Market. At the NW corner of the site, a pavilion-like building holds the City Market offices. At the east edge of the site, the urban farm and greenhouse provide a demonstration farm for people to learn about the benefits of urban agriculture.

Image source: By Author



Figure 86. Axon view of the scheme looking south.

Image source: By Author

Scheme 02, Around the perimeter



Figure 87. In this scheme the buildings line the perimeter of the site but 1st Street is retained, unlike Scheme 01. The winery and agriculture center are on the west lot, and the City Market and urban farm are located on the east lot. The large open space in the middle of the site leave room for the City Market to retain an open-air element. No built structures marr the view into the site from Water Street to maximizie visibility for the majority of traffic, both vehicular and pedestrian.

Image source: By Author



Figure 88. Axon view of the scheme looking south.

Image source: By Author

Scheme 03, Residential mixed-use (alt. Scheme 04, West lot only)



Figure 89. In the spirit of the CMDA's Market District vision, this scheme includes a mid-rise apartment/condominium element above the Market. The winery, agriculture center and urban farm are restricted to the western lot only. An alternative to this scheme would be to exclude the east lot entirely and assume that Charlottesville will control the City Market project.

Image source: By Author



Figure 90. Axon view of the scheme looking south.

Image source: By Author

Chapter 11: The Final Proposal

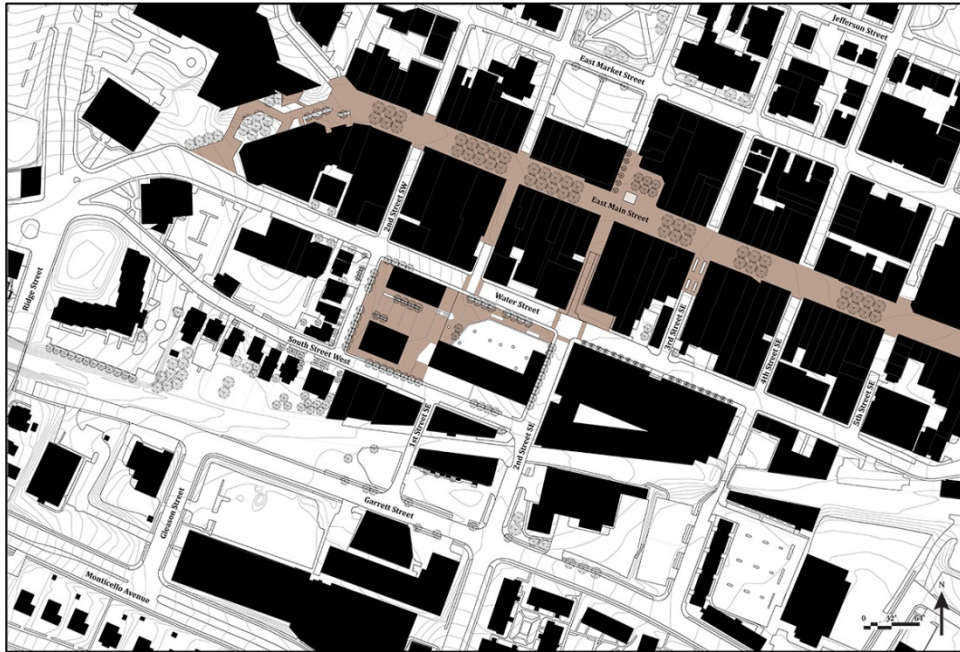


Figure 91. Figure/ground drawing of the site and its relation to the Downtown Mall. The extended brick paving is colored.

Diagram by Author

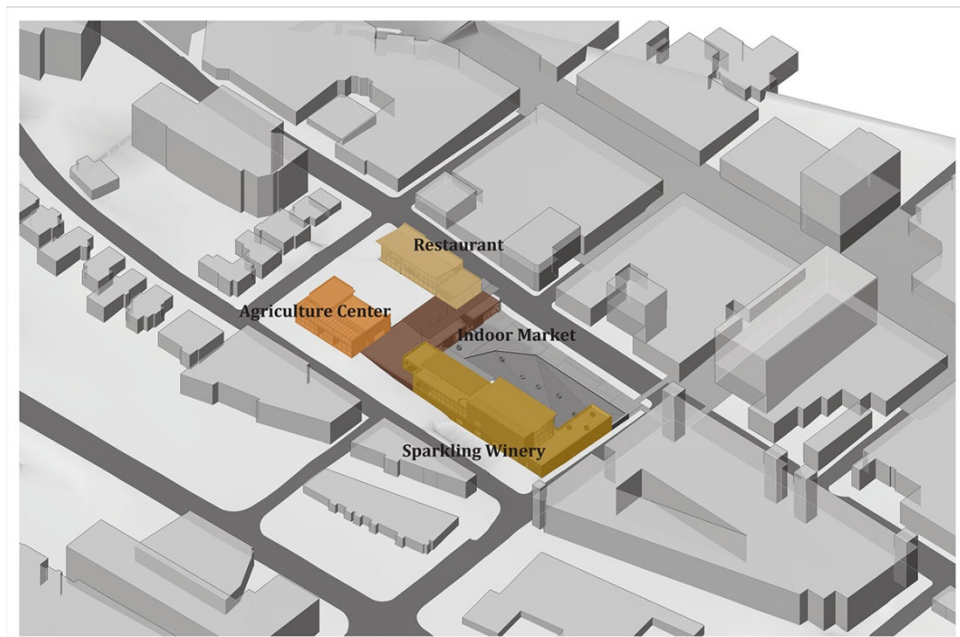


Figure 92. Proposed distribution of buildings on site.

Diagram by Author



Figure 94. *Vehicular circulation around the proposal site.*

Diagram by Author

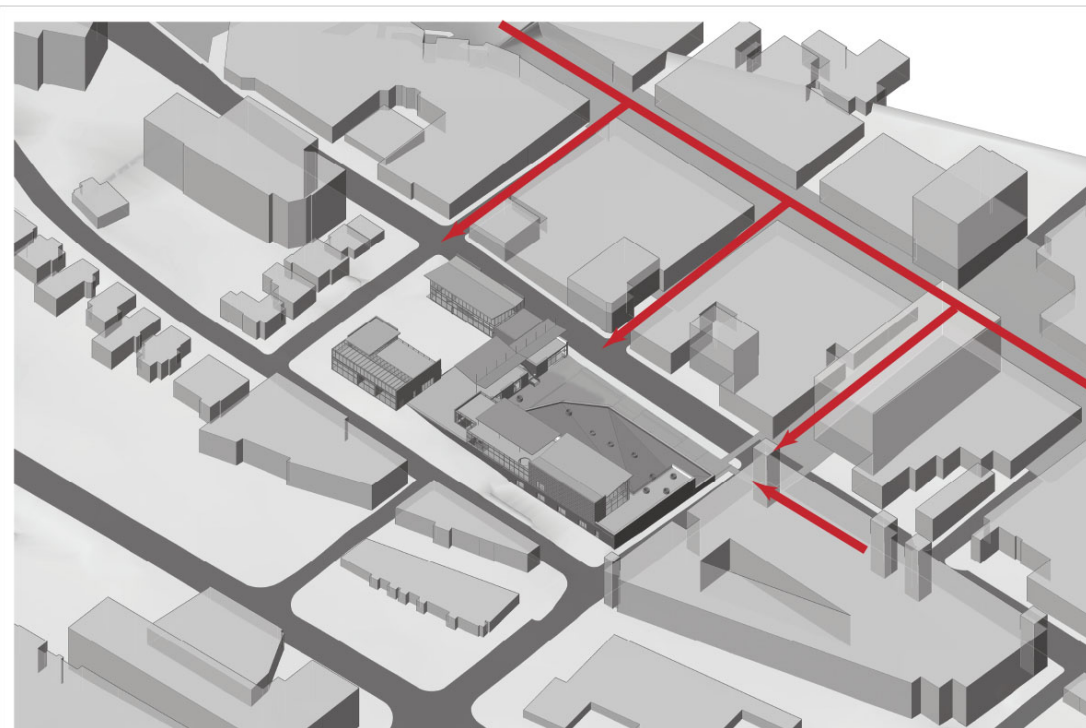


Figure 93. *Pedestrian path to site*

Diagram by Author

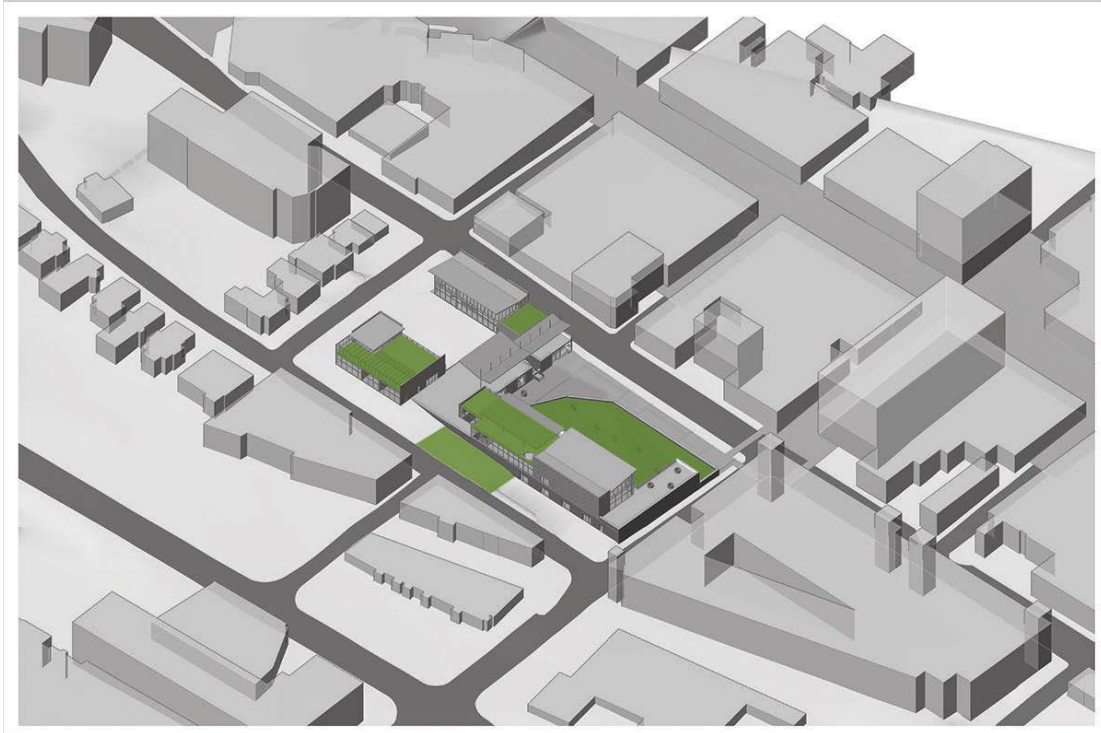


Figure 96. Growing areas in proposed scheme.

Diagram by Author

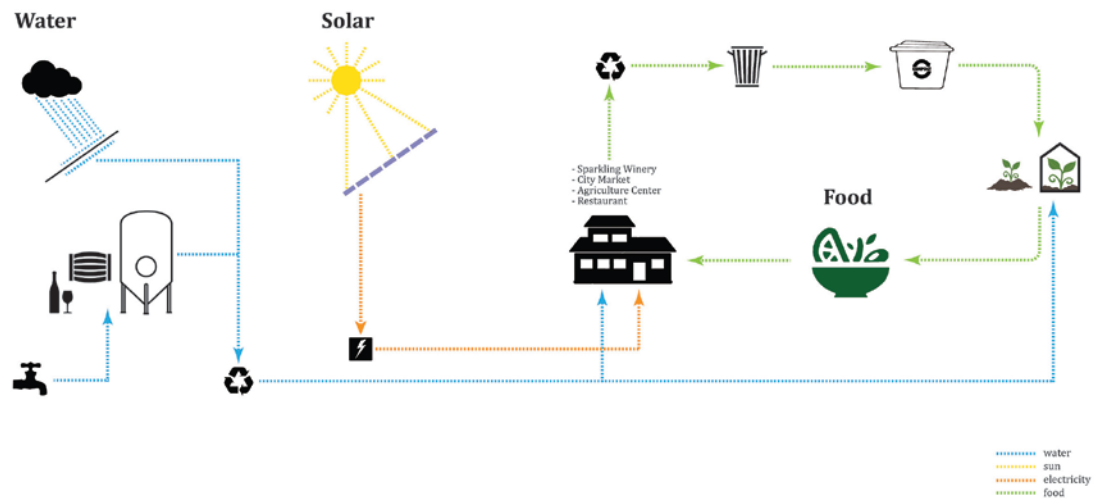


Figure 95. Diagram showing the sustainable interrelationships between the campus buildings.

Diagram by Author, Chau Pham

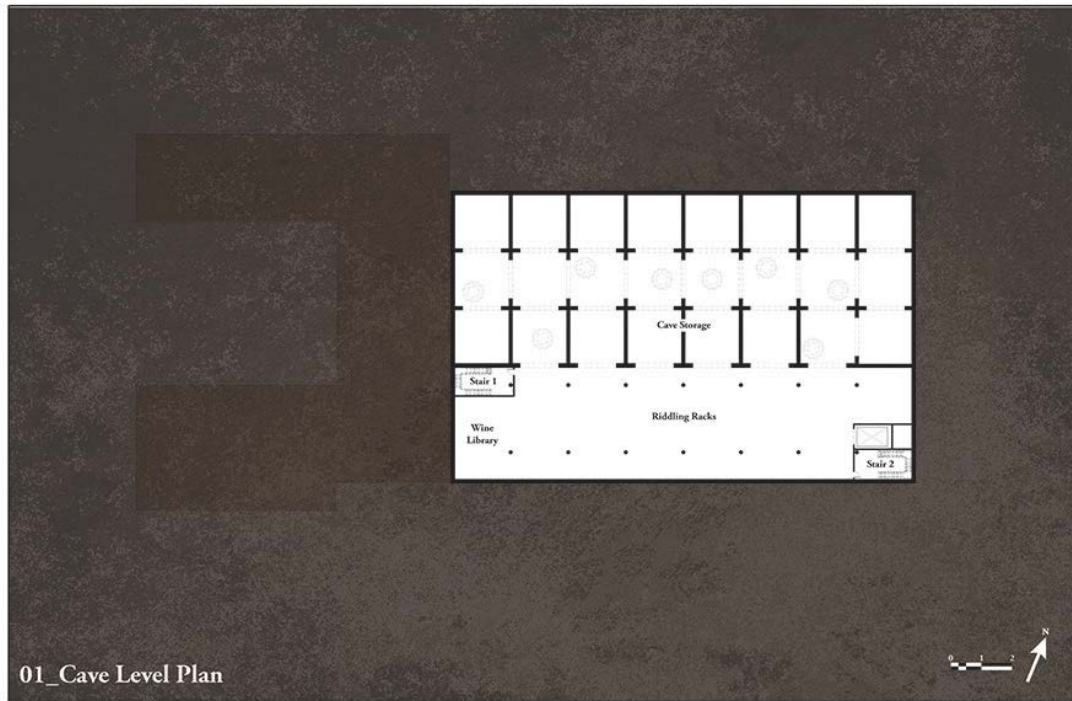


Figure 98. *Cave Level Floor Plan*

Image by Author, Jonathan Ing

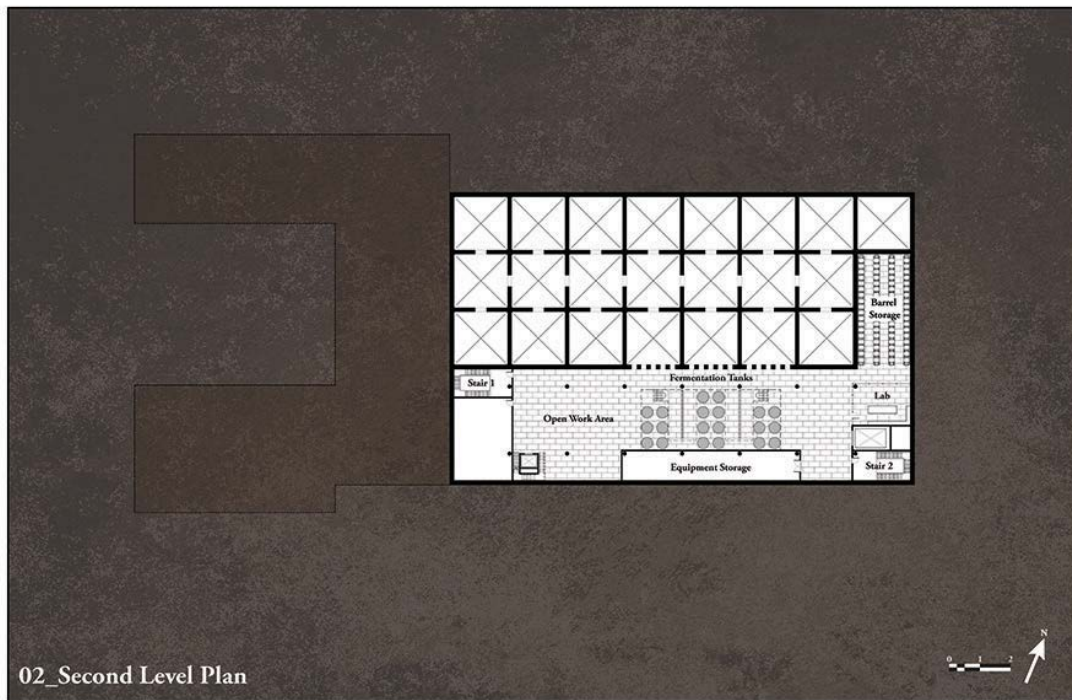


Figure 97. *Second Level Floor Plan*

Image by Author, Jonathan Ing

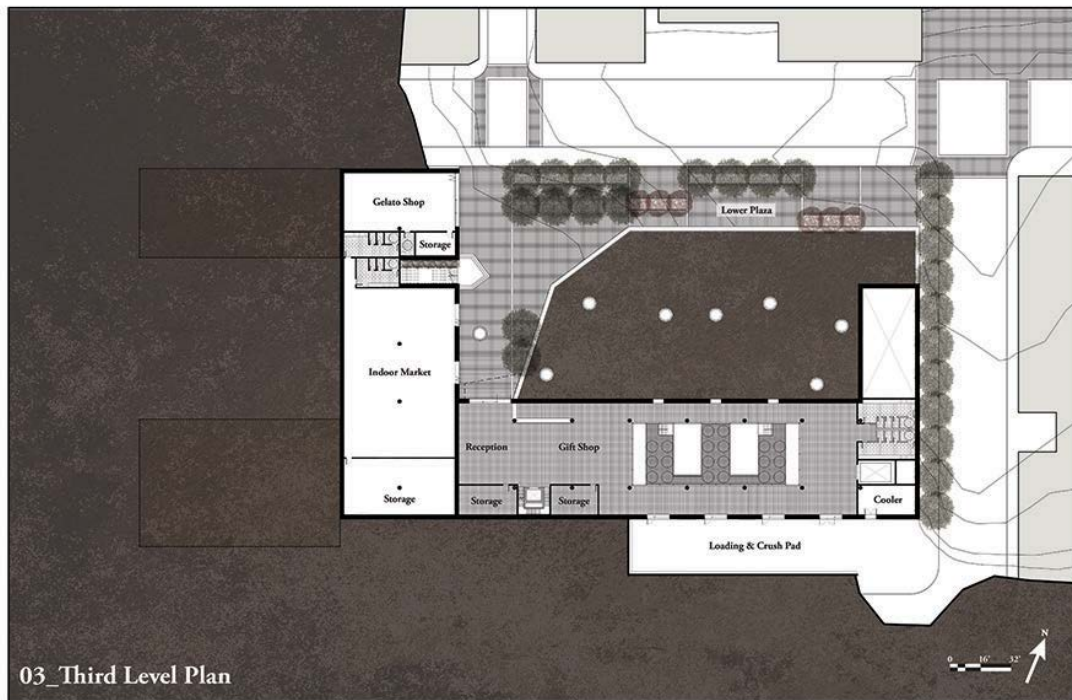


Figure 99. *Third Level Floor Plan*

Image by Author, Jonathan Ing

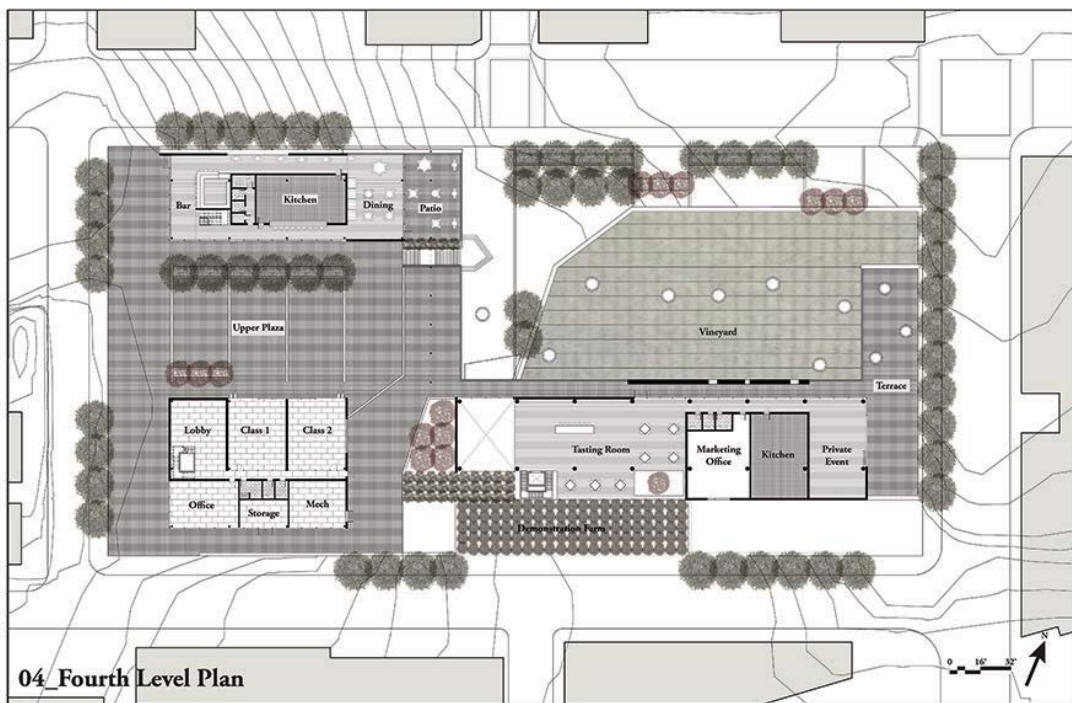


Figure 100. *Fourth Level Floor Plan*

Image by Author, Jonathan Ing

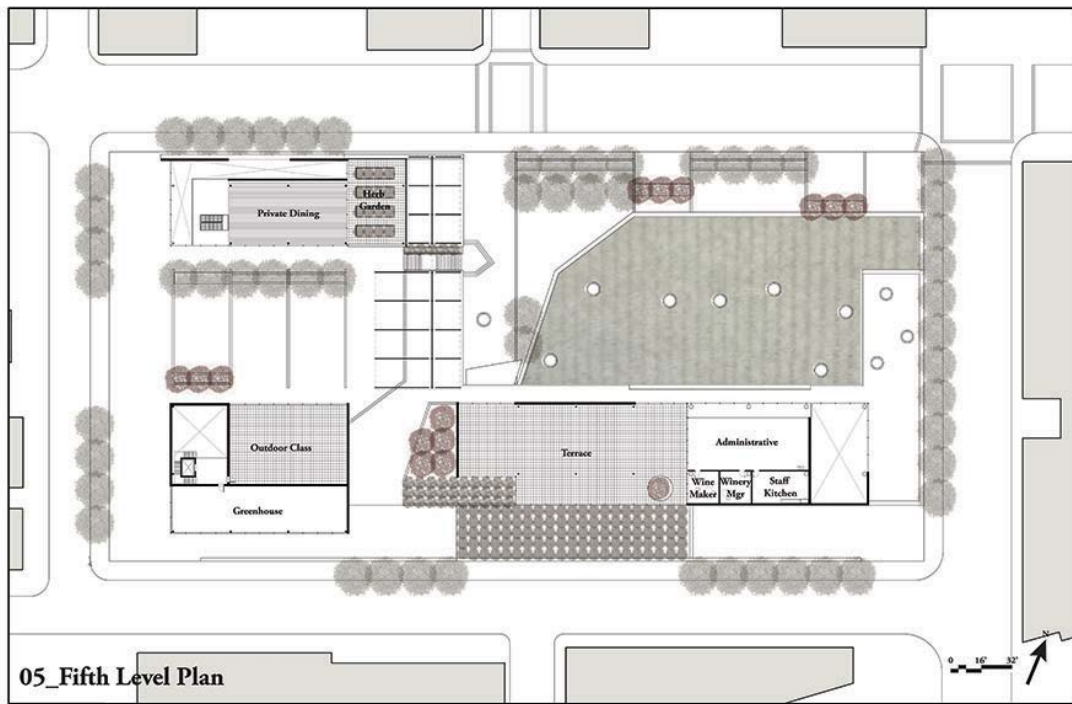


Figure 101. *Fifth Level Floor Plan*

Image by Author, Jonathan Ing

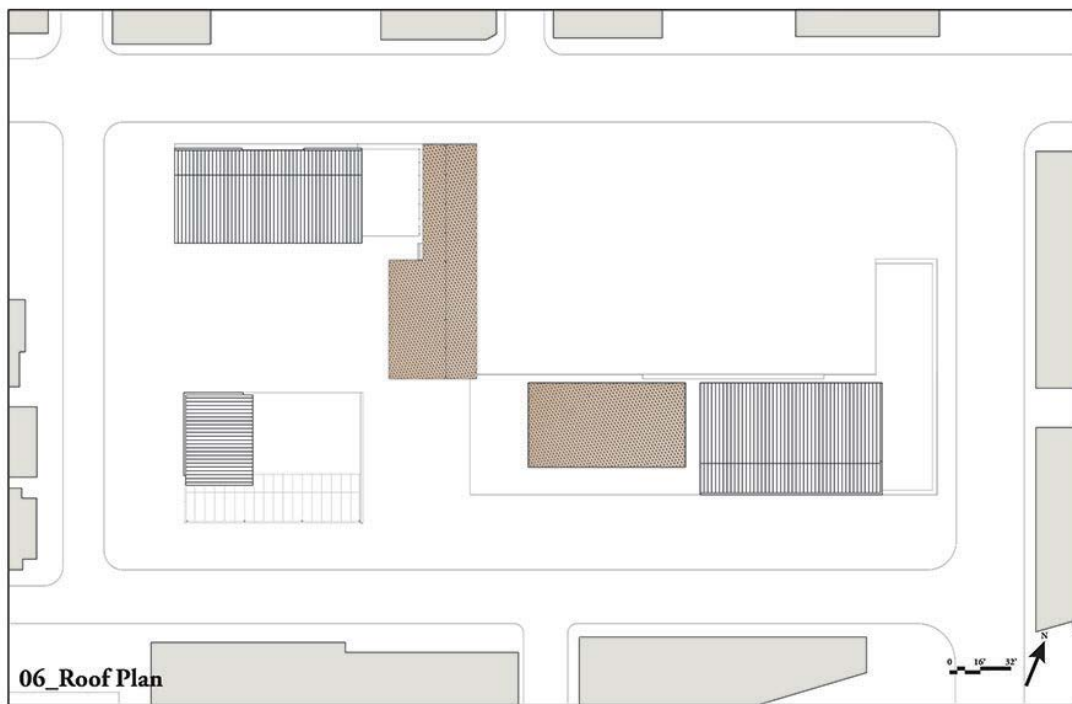


Figure 102. *Roof Level Plan*

Image by Author, Jonathan Ing

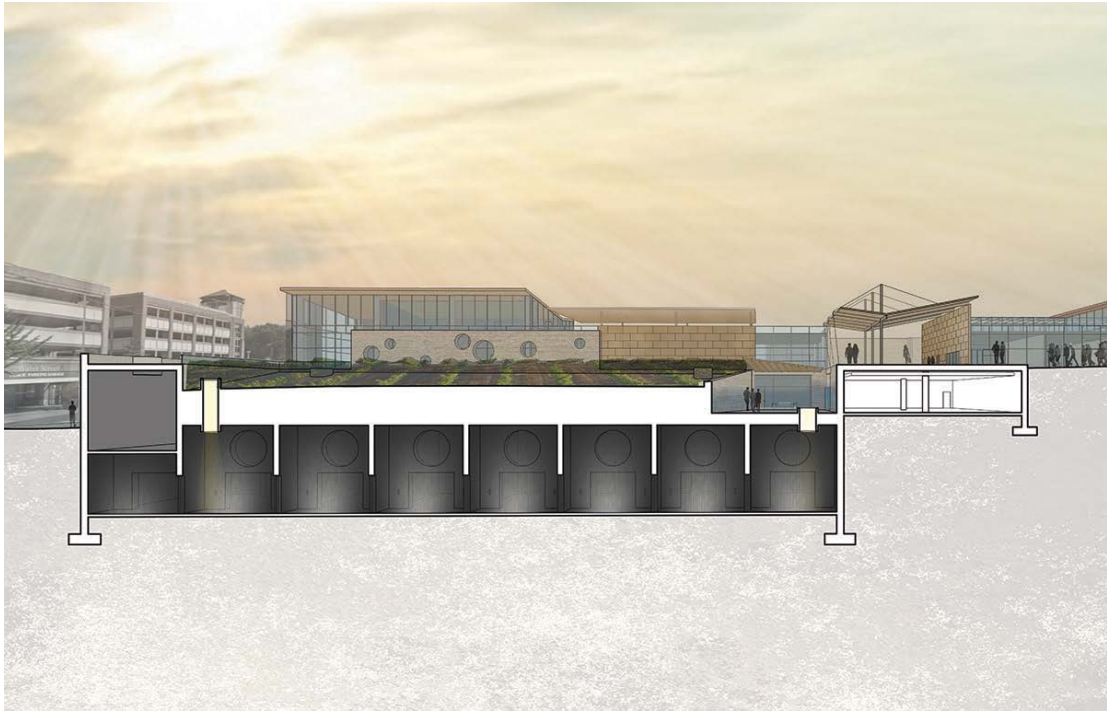


Figure 104. Longitudinal section of the winery showing relationship of vineyard to caves and building entry.

Image by Author, Chau Pham, Kiley Wilfong

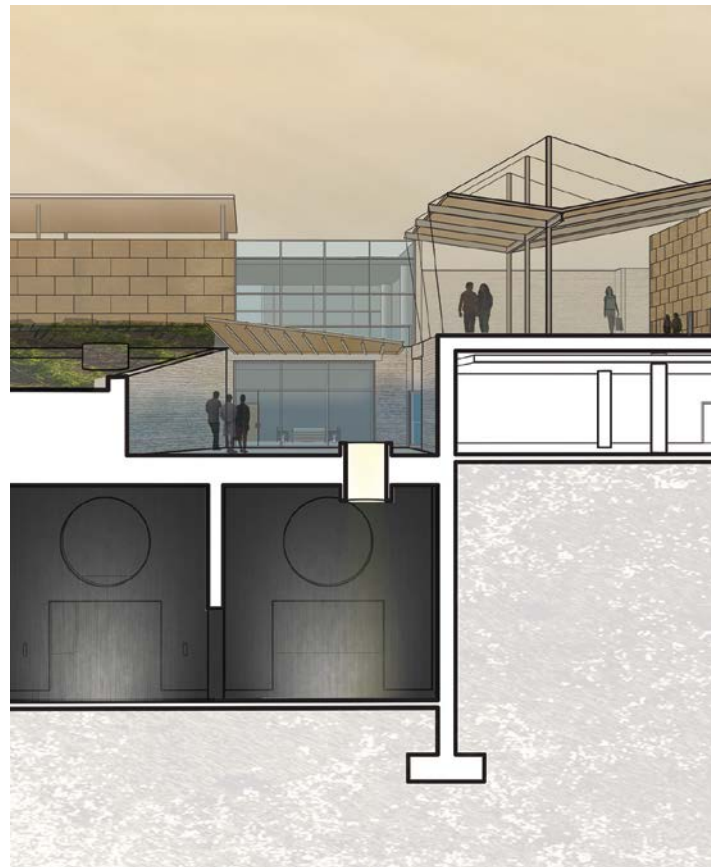


Figure 103. Detail view of winery entry highlighting relationship of light canon to cave



Figure 105. *The Chora space of the winery, where the resting wine gains its sparkles and shafts of light inspire small moments of surprise to visitors of the winery.*

Image by Author, Kiley Wilfong

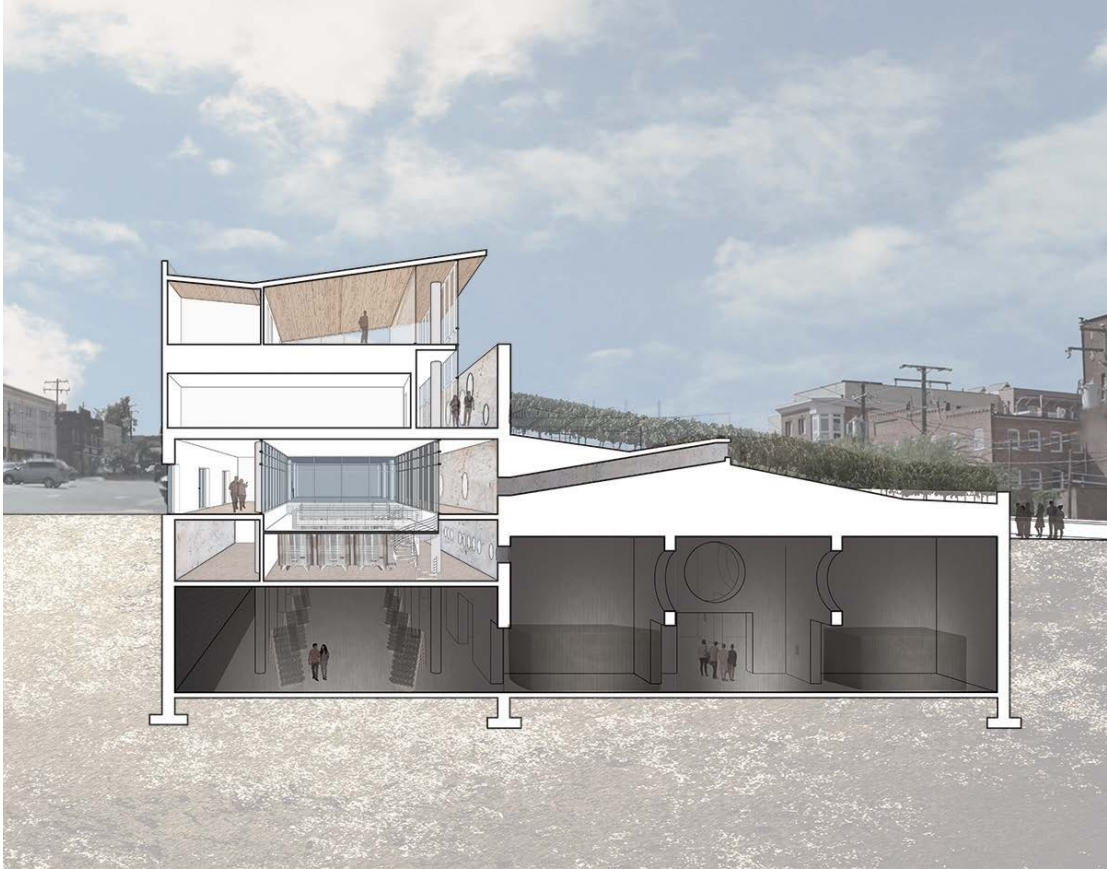


Figure 107. *Transverse section perspective through fermentation room and caves, with view portal through vineyard.*

Image by Author, Michele Rubenstein, Meredith Friedman, Nicole Ng

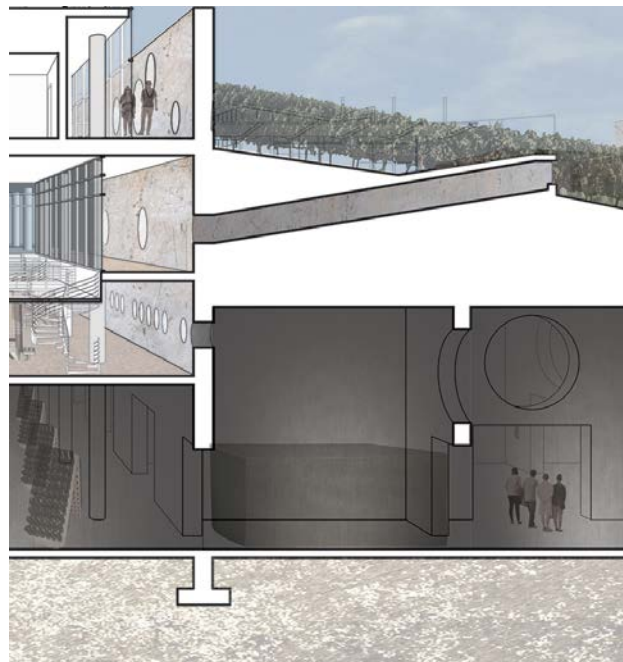


Figure 106. *Detail view highlighting view portal from fermentation room through vineyard.*



Figure 109. Winery visitors are able to process around the fermentation room from the entry level and watch the fascinating winemaking process as it occurs.

Image by Author, Michele Rubenstein, Kiley Wilfong



Figure 108. The winery tasting room.

Image by Author, Nicole Ng



Figure 110. *The upper plaza on market days provides ample room for vendors to set up their booths.*

Image by Author, Zhao Chen

Final Thoughts

Even though we live in a machine-regulated world today, our basic biology is still based on an agrarian lifestyle. We are bio-centric creatures at heart. For this reason and many others that I've discussed throughout this document, it is important for people to stay connected to nature and be knowledgeable about the food we put into our bodies.

The proposal that I've developed for the purpose of this thesis project is located in Charlottesville, Virginia, an area steeped in history and natural resources. For that reason I have had rich material from which to draw my interpretations of *terroir* and craft. However, both of these terms are universal in nature and could be used to derive a new set of solutions in any region of the world. Instead of a winery, perhaps another program element could be substituted that reflects the local

agriculture community. People and nature are inextricably bound together in an enduring relationship that even those in the city need to recognize, foster, and respect. In this way we can find a way to live more sustainably, with a greater degree of self-awareness and preservation of these traditions which have so greatly impacted our culture.

Glossary

<i>Chora</i>	Space, or place; the milieu in which forms materialize; also contains an irreducible, yet often overlooked connection with the functions of femininity, being associated with a series of sexually-coded terms: “mother,” “nurse,” “receptacle,” and “imprint-bearer”
<i>Cuvée</i>	A wine blend
Culture	The set of shared attitudes, values, goals, and practices that characterizes an institution or organization; the cultivation of plants
Legs	The slender trails of wine that slide down the side of the glass after it is swirled around. Swirling the wine in this fashion indicates how much ethanol alcohol is present in the wine. More legs = more ethanol alcohol (also referred to as “tears”)
Mouthfeel	The texture of a substance as it is perceived in the mouth
<i>Terroir</i>	The combination of factors, including soil, climate, and environment, that gives a wine its distinctive character
Viniculture	The cultivation of culture of grapes especially for wine making (also called viticulture)
Vintage	A special wine made when there has been a particularly good year for the grapes. In a vintage wine, only juice from that year may be used, and in general vintage wines can be aged for much longer.

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