

LANDSCAPE ALCHEMY

**CULTIVATING FUTILE TERRAIN
AND
HUMAN - LANDSCAPE COHERENCE**



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CULTIVATING FUTILE TERRAIN AND HUMAN – LANDSCAPE COHERENCE

THE STONEGATE GARDEN PROJECT

A Thesis Project
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ABSTRACT

Today, people are beginning to realize that there is something wrong with the way we live. Questions are being asked about the current and future state of our world, and what we will do about it. Will climate change subdue humanity? Is pollution reaching a dangerous threshold? Will the global food system collapse? It seems to be a growing belief that solving these issues will take a large sum of money, collaboration, technology and energy. Perhaps investing in these highly mechanized systems may temporarily assuage the relentless decay of our world and ourselves - but will these truly be solutions? In order to develop a solution to a problem, one must recognize *what* it is and *why* it is. Without this, a proposed solution cannot be successful.

This thesis does not attempt to solve the climate change issue. It does not attempt to develop new solutions for reducing deforestation. It does not attempt to understand the ecology of species driven to extinction or designing a new technology that will clean up our polluted environment. The goal of this thesis, however, is to understand why these issues occur, how they are all related, and how one promising plot of unused land may hold the fundamental answer to many of these issues.

In this thesis, I aim to break the bounds of the way we envision ourselves and interact with our landscape in a progressive attempt to implement a globally significant philosophy into a proposed plot of unused land. This thesis aims to understand the causal problem with the way we live, and using this knowledge within the design process. The Stonegate Garden will be more than a cultivated piece of land or an attractive escape from

urbanity, but a way to change the relationship with our landbase and ourselves.

The research thesis is broken into two primary ingredients. The first attempts to understand the history of what has brought us to our current critical point, and how this understanding can lead to a foundation for a design hypothesis that is inspired by our time proven past. I call this *Human-Landscape Coherence*. The second ingredient takes a practical look at the specific elements and conditions of the site, and seeks to develop a set of detailed guidelines in order to make the garden a viable possibility. I simply refer to this by the name of the site – *The Stonegate Garden*. These two elements will thus lead to a set of conceptual design illustrations.

The crisis I not with the world, it is with us, and therefore we must change ourselves before we materialize it into the world.

TABLE OF CONTENTS

PART 1: HUMAN – LANDSCAPE COHERENCE

IN DEFENSE OF OUR PAST	2
A CRITICAL PATH	3
THE RIFT – HUMAN NATURE?	3
PANDORA'S BOX	6
THE CURSE OF AGRICULTURE	7
THE ILLUSION OF OUR (AGRI) CULTURE	11
FINDING OURSELVES THROUGH THE LANDSCAPE	13
RETURNING TO THE LAND	14
BEYOND COMMUNITY BEYOND CIVILIZATION	15
THE RIGHT APPROACH	17
HUMANITY'S NEXT SHIFT	20

PART 2: THE STONEGATE GARDEN PROJECT

PREFACE	22
UNDERSTANDING THE LANDSCAPE	23
PROJECT INTRO AND EXISTING CONDITIONS	24
NEIGHBORHOOD CONSTRAINTS AND SOLUTIONS	25
CASE STUDY – 5 TH ST. GARDENS IN DAVIS, CA	27
ENVIRONMENTAL CONSTRAINTS AND SOLUTIONS	28
SOIL	28
SUN AND WIND	33
VEGETATION AND WEEDS	34
FROM THEORY TO REALITY	40
DESIGN OF LANDSCAPE COHERENCE	41
THE DESIGN	47
SUMMARY OF THE DESIGN ELEMENTS	56
TRANSCENDENCE	59

FOR THE FEW OUTSIDE, LOOKING IN, AND THE ONES THAT WILL SOON JOIN THEM

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"It IS possible to get out of a trap. However, in order to break out of a prison, one first must confess to being in a prison. The trap is man's emotional structure, his character structure. There is little use in devising systems of thought about the nature of the trap if the only thing to do in order to get out of the trap is to know the trap and to find the exit. Everything else is utterly useless: Singing hymns about the suffering in the trap, as the enslaved Negro does; or making poems about the beauty of freedom outside of the trap, dreamed of within the trap; or promising a life outside the trap after death, as Catholicism promises its congregations; or confessing a semper ignorabimus as do the resigned philosophers; or building a philosophic system around the despair of life within the trap, as did Schopenhauer; or dreaming up a superman who would be so much different from the man in the trap, as Nietzsche did, until, trapped in a lunatic asylum, he wrote, finally, the full truth about himself—too late. . . .

The first thing to do is to find the exit out of the trap.

The nature of the trap has no interest whatsoever beyond this one crucial point: WHERE IS THE EXIT OUT OF THE TRAP?

One can decorate a trap to make life more comfortable in it.

This is done by the Michelangelos and the Shakespeares and the Goethes. One can invent makeshift contraptions to secure longer life in the trap. This is done by the great scientists and physicians, the Meyers and the Pasteurs and the Flemings. One can devise great art in healing broken bones when one falls into the trap.

The crucial point still is and remains: to find the exit out of the trap. WHERE IS THE EXIT INTO THE ENDLESS OPEN SPACE?

The exit remains hidden. It is the greatest riddle of all. The most ridiculous as well as tragic thing is this:

THE EXIT IS CLEARLY VISIBLE TO ALL TRAPPED IN THE HOLE. YET NOBODY SEEMS TO SEE IT. EVERYBODY KNOWS WHERE THE EXIT IS. YET NOBODY SEEMS TO MAKE A MOVE TOWARD IT. MOIRE: WHOEVER MOVES TOWARD THE EXIT, OR WHOEVER POINTS TOWARD IT IS DECLARED CRAZY OR A CRIMINAL OR A SINNER TO BURN IN HELL.

It turns out that the trouble is not with the trap or even with finding the exit. The trouble is WITHIN THE TRAPPED ONES.

All this is, seen from outside the trap, incomprehensible to a simple mind. It is even somehow insane. Why don't they see and move toward the clearly visible exit? As soon as they get close to the exit they start screaming and run away from it. As soon as anyone among them tries to get out, they kill him. Only a very few slip out of the trap in the dark night when everybody is asleep."

PART 1

HUMAN - LANDSCAPE COHERENCE



IN DEFENSE OF OUR PAST

"We are inclined to think of hunters and gatherers as poor because they don't have anything; perhaps better to think of them for that reason as free."

- MARSHAL SAHLINS

A CRITICAL PATH

There is a trend in the world. It is a trend, although very young, that has exploded into a global phenomenon. The influence and power of this paradigm has literally shaped the lives of every person and living organism on this planet. What could possibly be more powerful than that?

The root of this trend is difficult to explain. Some call it globalization, revolution, civilization, or even human nature. The causes and ethics of this trend are just as esoteric. However, it is slowly becoming clear that this path, influenced by a shift, is one that cannot continue to be followed. There are many detrimental effects caused by this contemporary movement. The explosiveness of these effects has followed an exponential curve that is taking a toll not only on our living planet, but ourselves.

What is it that we are losing? The forests? Plant and animal species? Our health? Our own means to survive? Our minds? Yes, yes, yes, yes and YES. But why? What is it that drives this collapse? At what point does a tenant of life consider survival – a means to life - secondary to the promise of luxury? At what point does a species strive for death over life? This threshold is

reached, in our case, when the coherence between man and his or her landscape is lost – when a living being is no longer native. We no longer submit to nature. We are beyond the bounds of the wild. We are our own architects, designers of our own world. Humanity has converged on a quick and piercing destructive phenomenon that has been sparked by this loss, and fueled by the potential of material intelligence.

THE RIFT – HUMAN NATURE ?

As mentioned, the root of the prevailing trend is difficult to understand, but let me try to clarify the series of events that has led me to this thesis.

Roughly 10,000 years ago, between the transition from the Neolithic Age and the Bronze Age, a very important event occurred. The perpetrator of this event may have been amazed, surprised, confused or excited. This person was justified to any and all of these emotions, because the innovation that he or she had uncovered will soon be understood as one of the most important changes in our history as a species. This was the discovery of agriculture.

There is a clear reason why we know almost nothing about the details of the discovery of this powerful tool. Perhaps some anthropologists or archeologists consider to have the answer, but the point is that it is very unclear who, where, when and why this discovery occurred. This is because the moment agriculture was discovered, history began. Today, we learn in school that history began about six to seven thousand years ago. If considered, this must seem strange to the doubtful and curious. Although very rare, the public school system got this one right – history did begin between five and ten thousand years ago.¹ This is not to say that people throughout our much longer human past did not have personal histories rich with stories and ideas², but social history began to be recorded and monitored, through a variety of methods, roughly following the advent of agriculture.

Prior to agriculture, two other keystone discoveries had a profound influence on humanity. These were the discovery and manipulation of fire, and the advent of spoken (and, eventually, written) word. Why is it that *agriculture*, the third and final paradigm of our prehistoric past, defined the shift from “prehistory” to history? In order to answer this question, we must understand what defines history – change.³ Social history is based on the

various events that change people, societies, and civilizations. Without change, there is no history.⁴ Again, this is not to say that people, and the world for that matter, prior to 10,000 years ago never experienced dynamic shifts or never had to adapt to the variations and changes in the world. Earthquakes and hurricanes affected habitats, disease and pathogens swept populations. These changes are inevitable, but they were based on the cycles of nature. Hence, the people of prehistory (or pre-agriculture) lived in cyclical cultures – progressions that followed the cycles of nature and evolved very gradually with the changes around them.⁵ There was no need for growth or expansion. People, for the most part, lived off the land in a steady equilibrium – minimizing change and growth, and maximizing their knowledge and connection with their local landscape.

This is in complete contrast to the way we live today. Our culture is that of a linear model⁶ defined by the notion of “progress” - initiated by a great shift in our culture through agriculture. This model devalues the importance of natural cycles, knowing and living with your landbase, and attempts to develop its own guidelines and boundaries in complete disregard of the equilibrium of the world. This is, of course, how we justify

pillaging our own landbase for exploitation and profit. It is why the world is in a critical state.

As agriculture has rooted social history through change, it has also rooted a change in our culture. It is easy to identify those who are in “our” culture. If you go anywhere in the world and the food is under lock and key, these people are part of this culture.⁷ The superficial elements of each of these cultures will certainly differ – religious views, holidays, dress, food, etc. Yet when it comes down to the most important element – getting the food they need to stay alive – they are all alike.⁸ In this culture, the food is all owned. If you want it, you must buy it. Through agriculture, food has become a commodity.⁹ Putting food under lock and key is a unique system exhibited by no other culture in the history of life. It is this commodification that has created what many fallaciously refer to as “human nature”, yet should be referred to as civilization.

For millions of years, people had many ways of making a living on this planet. Yet during the transition from prehistory to history, a culture – civilization – believed that there is only one way to live, their way.¹⁰ This way of making a living (although it should be referred to as “making a killing”) commodifies our primary source of survival while simultaneously eliminating any other

means to live. In a sense, civilization monopolizes the human system into one way - the way of maximum harm.¹¹ 10,000 years of implementation and execution of their belief, the diverse cultures and ways of life that once flourished throughout the world have been eliminated and devoured by civilization. (Besides, of course, the small decaying tribes that must survive the pressures of civilization and hide in the corners of the world). Today, we, as Americans, have epitomized the belief that there is only one way to live – everyone must work 40 hours a week, own a car, a house, a TV, etc.

Pandora's Box

"If you can force people to pay just so they can be alive on this earth – nowadays these payments are usually called rent or mortgage – you've forced them into the wage economy. The same holds true for forcing them to pay for materials the earth gives freely: the salmon, bison, huckleberries, willows, and so on, that are central to the lives, cultures, and communities not only of the indigenous peoples but to all of us, even if we make believe that isn't the case... the need to separate the majority of people from their food supplies – thus separating them also from their freedom – was central to the design of civilization's early cities."

- Derrick Jensen



The Myth

“When Prometheus first created humans, he had only created men. Prometheus made them and Athena breathed them to life. Then one day there was a quarrel between the Olympians and men. Prometheus tried to solve this problem by sacrificing a bull for the first time at a festival. The Titan then decided to trick the gods. He butchered the bull then split it into two portions, one for men and another for the gods. One portion was made of lean meat, and the other was just bones covered with a thick layer of fat. Prometheus then offered the two portions to Zeus to decide which one should be offered to the gods. Zeus figured that the layer of fat was covering juicy meat and picked that portion. When Zeus realized that he had been tricked, he was furious. He took fire away from man so that they could never cook their meat or be warm again. Prometheus reacted by stealing back the fire for the human race. Zeus swore vengeance.

The leader of the gods went to Hephaestus, the god of fire, and asked him to create a clay woman with a human voice. The god of fire labored day and night over this clay woman until finally he was finished. Athena then breathed this woman to life. She clothed the woman and taught her how to weave. Aphrodite made this woman beautiful. Finally Hermes taught the woman to charm and deceive.

Zeus was delighted when he saw this woman. Then his plan for revenge had begun. Zeus named the woman Pandora and sent her as a gift to Epimetheus. Epimetheus had been warned by his brother Prometheus, not to accept gifts from the gods but he ignored his brother's warning and married Pandora. At

the wedding, Zeus gave Pandora a box as a gift, but he told her that she must never open it. They were very happy for a while then one day Pandora couldn't resist for she was rather curious what was in the box. While everyone was out she unlocked the box and slightly lifted the lid but before she realized what had happened disease, despair, hunger, poverty, war, sickness, death, old age, greed, violence and a few more evil things flew out of the box. She quickly closed the box leaving one thing in, hope.”

THE CURSE OF AGRICULTURE

We know very little about our past. Again, we only learn of the social changes that define “progress”, but possess a less than modest level of knowledge of our important pre-agricultural past. Strides in paleoanthropology and paleopathology, as well as contemporary studies of historically significant peoples, are beginning to bring light to our history as a species. Through these studies, the widely accepted notion that the agricultural lifestyle is a prevailing improvement and superior to the hunter-gatherer lifestyle of our past is beginning to be put into doubt. This notion, endorsed and accepted by our civilized culture, claims that the hunter-gatherer lifestyle is “primitive”, and that agriculture has brought us health, longevity, security, and leisure.

If agriculture had been such a great idea, with the promises that this notion claims, you would expect it to have spread very quickly upon discovery. Paleontology has proven this hypothesis wrong. Agriculture spread across Europe and the Middle East (from its origins in the Middle East) at a sluggish pace.¹² It took 2,000 years for the idea to be adopted in Greece (a distance under 1000 miles from its origins in the Near East). It took 4,500 years for it to reach Northern Europe.¹³ In broad view of this temporal-spatial acceptance, agriculture was something taken on with curious reluctance.

As recently as the 19th Century, all Native Americans of California remained hunter-gatherers. These people were well aware of agriculture – through contact and trade with local farming tribes in Arizona – yet seemed to be aware of agriculture's golden façade, and the drawbacks that resided within those that naively adopted it.¹⁴

The Bushmen of the Kalahari are another surviving example of how the notion, that agriculture is an improved and higher way of living, may be false. Amazingly, these hunter-gathering tribal peoples generally have plenty of leisure time, get plenty of sleep, and work no harder (if not less) than their farming neighbors.¹⁵ For instance, the average amount of time

devoted to food collection and provision for the Bushmen is about 12 to 19 hours per week.¹⁶ While farmers concentrate on high-carbohydrate crops that are very low in nutrient value, such as rice, wheat, and potatoes (which provide the contemporary world 50% of their daily diet / caloric intake), a diverse mixture of wild plants and animals provide hunter-gatherers, such as the Bushmen, a healthier and more balanced diet.¹⁷ The average Bushman's daily diet contains 2,140 calories and 93 grams of protein – considerably higher than the “Recommended Daily Allowance” for people of their small size.¹⁸ These people are very healthy, suffer from little disease, enjoy a diverse diet, and are unbound of the prospect of famine that plague farmers.¹⁹ Surviving on over 85 wild plants, it is almost inconceivable for Bushmen to die of starvation - a situation all too common in the agricultural realm (i.e. Potato famine of Ireland in the 19th century which killed over 1 million people or the 8 million people who die each year of starvation and malnutrition).²⁰ Farming has pushed these last remaining hunter-gatherer tribes into desolate areas unsuitable for agriculture, yet they still thrive in these infertile landscapes. Hunter-gatherers that once occupied the now agriculturally developed fertile lands of the past, clearly, would have been even better off.²¹

Paleopathology has uncovered another hidden truth about agriculture. The claim that agriculture has improved our health is indeed questionable. For example, excavated remains of Native American peoples along the Illinois and Ohio River valleys have proven decay in public health following the adoption of agriculture.²² In comparison to hunter-gatherer skeletons of the same people prior to the adoption of maize cultivation in this region, the skeletons of the agricultural natives demonstrated seven times as many dental cavities and abscesses, significantly poor enamel of children's milk teeth – thus signifying malnourishment of mother's breast milk, a mortality increase of those over the age of 50 by 500% (as well as an overall increase in mortality rates at every age), a 400% increase in Anemia, the establishment of tuberculosis as an epidemic, the suffering of yaws or syphilis by half the population, and over 60% of the population suffering from osteoarthritis or other degenerative diseases.²³ Similar conclusions of people transitioning from hunter-gatherer lifestyles to agriculture emerge from studies of skeletons elsewhere in the world.²⁴

Aside from malnutrition, starvation and disease, agriculture cast another curse on humanity – social division.²⁵ As briefly mentioned, the commodification of

stored food sources is a hallmark of our culture, a staple of civilization facilitated by agriculture. Hunter-gatherers have little or no stored food, and live off wild plants and animals in their local environment. All, aside from infants, the sick and the old, join in the search and collection of food. Therefore, there can be no royalty, no specialized professionals, no unjustly superior social parasites who grow fat on food seized by others.²⁶ Only in an agricultural system can a stark contrast between the diseased and malnourished productive masses and a healthy non-producing elite occur.²⁷ Again, paleopathology has proven the superior health of the elite minority and the poor degenerate health of the laboring masses who support them. This notion seems to have been dismissed in today's world. Proponents of our current agricultural system claim the clear abundant health that has progressed since these "Dark Ages" of the past. Yet it is clearly effortless and naïve for these proponents, who reside in one of the 1st world industrialized nations 100% of the time, to claim this idea. These fortunate residents, residing in the nations of bounty (USA, Europe, certain oil wealthy nations) represent the "healthy elite minority" dug up from civilizations past. The incarcerated masses of today's 3rd world nations, which constitute the majority of our current world's population, are the ill-fated "poor malnourished

masses" dug up in civilizations past. We few elite in industrialized nations, fueled by oil and globalization, are supported by the hard-working poorly nourished majority throughout the world. Today's world not only exhibits the same feudal social hierarchy of our agricultural "dark ages", but it reflects these detrimental elements at a global magnified scale. This is the bane of agriculture.

If agriculture is such a disadvantageous way to make a living, why was it adopted by the whole of humanity? The spread of agriculture was slow and complex, yet as each person, village or society opened its Pandora's box, it was the prospect of quantity that enticed them. Agriculture can support a higher population than the hunter-gatherer lifestyle.²⁸ For one, agriculture allows more food to be cultivated from less land (thus allowing more mouths to be fed) when compared to hunting and gathering, which requires more sparsely dispersed wild plants and animals within a natural landscape.²⁹ Additionally, nomadic hunter-gatherers have to keep their children spaced by several years due to the obligation of parents supporting their infants until independent maturity is reached.³⁰ Agriculture allows a settled sedentary lifestyle (don't confuse this with the ubiquitous obligation for farmers to laboriously work the land), which decreases the stresses

of guiding the young in an active nomadic life, and therefore promotes a higher frequency of bearing and supporting children with less effort.

Perhaps one of the most important misconceptions about agriculture, regarding its conceived beneficial component that it provides more food per area of land, is that we tend to forget that it also means more mouths to feed, due to its population encouraging elements. When perceiving this idea, it becomes clear, in a literal and abstract way, that we are turning the world's diverse and inclusive biomass into human-mass. Prior to agriculture, humanity was in equilibrium with its landbase. By abiding by the trophic system of the wild, humanity was able to thrive and be a part of its local ecology. Agriculture is a fundamental method by which this balance can be exploited – by converting the world's biomass (i.e. a large forest stand), which provides and sustains life for all resident species of that habitat, into a large agricultural swath, which provides and sustains life for humans only. This is literally and physically taking the diverse ecological biomass of a habitat and converting it to human flesh. It is why agriculture, growth and "progress" will not cease to expand until the bodily limits of the Earth are reached and depleted. It is why we have changed from a

beneficial part of ecology into a destructive malignancy. It is why the world is in a critical state. It is why we must change. It is why we must reopen Pandora's box to reveal what we still have left to save. It is why we must act.

THE ILLUSION OF OUR (AGRI) CULTURE

Agriculture has unmistakably changed humanity in several ways. It changed the way we acquired our source of food. It changed the way we interact with our local ecology. It changed the way we interact with each other. It changed the stratification of our social structure. It changed our culture.

Civilization is a product of this change – it is a product of an agricultural way of life. Without agriculture, cities – the hallmark of civilization – cannot exist. An issue of growing concern today is the balance between rural and urban peoples of the world. Yet we fail to realize that this is a dismissible ratio in the big picture. Unless we are talking about the Bushmen of the Kalahari or the Huli tribes of Papua New Guinea abandoning their established way of life to senselessly settle into an urban area, 100% of the time, this means farmers moving in to the city. Farmers and city dwellers

are ultimately part of the same system – the same culture.

By definition, what is a city? It is defined as people living more or less permanently in one place in densities high enough to require the routine importation of food and other necessities of life.³¹ Thus, a Tolowa village five hundred years ago in Northern California could not be considered a city because the people ate native and local salmon, clams, deer, huckleberries, etc. and had no need to import food and other supplies from elsewhere.³² Examine any city in the world today, and you will clearly see a different trend. The story of civilization is evoked through this system – the establishment and relentless growth of city(-states) by funneling resources from outside towards the center creating an increasing region of unsustainability surrounded by an increasingly exploited countryside³³ (to replete the city with food and provisions by means of agriculture). This “civil” system necessitates the emergence of social, economic and political hierarchy, division and specialization in labor, magnification of military power, economic exploitation of the weak/masses, and the endless requirement for slavery and forced labor.³⁴ Or as Stanley Diamond concisely put

it, "Civilization originates in conquest abroad and repression at home."

This is today's culture. This is where we have come. Will we accept this illusion? Will we accept that behind its paper thin gild, the cost of agriculture, civilization and our current homogenous culture will lead to a fated demise - a fate, not in the hands of destiny, but in humanity's own mystified trembling palms.

FINDING OURSELVES THROUGH THE LANDSCAPE

"To be civilized is to hold oneself in opposition to nature, which is to hold oneself in opposition to oneself, to be ashamed of the animality of the self, which to the fully civilized means the 'filth' of the self. All of this destroys any possibility of communication or entering into communion with anyone but other civilized humans. If we listen to the creatures and to the elements, and even to our bodies, we are then primitive, backwards. So we learn very early to put that away. We learn to despise ourselves and to feel ashamed of our bodies, to hate the dirt and to hate everything about us, because we're human, which means we're humus: they come from the same Latin root: earth and dirt.

But self-loathing is a difficult thing to acknowledge - maybe the most difficult - so all those characteristics we must loathe if we are to be civilized, if we are to dominate, get dumped into others who bear the shame and who end up feeling dirty."

- Jane Caputi

RETURNING TO THE LAND

So where have our designs led us? The systems we create have an apathetic incomplete goal to serve the “civilized” world rather than the absolute world. The processes of these systems have conditioned us to disregard the fundamental value of natural processes. In our rebellious trance against life, we have convinced ourselves that we are no longer a contingent in global and local ecology, and that nature's bounty is of never ending supply for our personal use. And now, after 10,000 years with this approach, and only 300 years of global application, humanity has reached a climax in its evolution.

Ironically, the proceeding disconnects between man and nature are considered as “progress” by those encouraging the path of civilization. Yet the outcomes of what we call “progress” are fundamental to the critical issues we face. This “progress”, which began with the advent of social history and agriculture, has quickly developed a division between humanity and its environment driven by the change in our relationship with our landbase.

“A SENSE OF PLACE IS CRITICAL.. WE ARE IN A SYMBIOTIC RELATIONSHIP WITH THE LAND WHERE WE LIVE, AND THE NOTION THAT THIS RELATIONSHIP SHOULD OR

EVEN CAN BE TRANSCENDED IS CENTRAL TO MANY OF OUR PROBLEMS.. LAND IS SOMETHING TO BE RESPECTED, AND THIS RESPECT FOR LAND MAKES RESPECT FOR SELF AND OTHERS POSSIBLE.”

- RICHARD DRINNON

The landscape is, by far, the primary source and means of survival and existence for people, as well as all living things. It is the only source of habitat, food, shelter, water, air – the sole source of life. Establishing a connection to the landbase anchors people to their source. Thus, a relationship with the land is established. This creates a sense of place, a sense of life. Moreover, this bond develops respect and beneficial associations with those sharing the same experience. It creates kinship and unity with others, as well as with all other forms of life in the bionetwork of the landscape. It creates a sense of self identity as a person and as a group of people. Furthermore, it creates a tribe. This inclusive bond thus acts as a reference point to which an entire morality, culture and lifestyle can be developed – one that acknowledges and works with the land (as opposed to exploiting the land for its resources, importing these provisions to disconnected city centers and, thus, completely disconnecting people from their source) – embracing a lifestyle that is truly sustainable.

The few endangered simple and colorful traditional cultures of the rural world are the last remaining paradigms of our indigenous history that once adhered to these principles. These tribal cultures are very important and fascinating in the preservation of ancient human traditions. Yet being a native or an indigenous person is not ubiquitous with this lifestyle. What these traditional cultures have, however, is a *holistic connection to their landbase*. This is an important principle that has been lost in the “civilized” realm, and must be relearned in order to reestablish a healthy relationship with our environment and create solutions to the issues we face today.

The futility and detriment of human ecology will soon reach a threshold of decaying conclusion. Will civilization ignore these signs and let history take its course? Will civilization attempt to use its material knowledge, which has fueled the growing destructive trend, to climb out of the hole it has dug? – Most likely to fall into another. Or will humanity overcome civilization by learning from its proven past, and re-embrace the cultures that it had once flourished in? - The culture of the indigenous. A culture that used a social structure that bonded the members with each other through the landscape.

BEYOND COMMUNITY – BEYOND CIVILIZATION

By definition, what is a community? Clearly, it is a form of social organization. The elements that comprise a community are relatively simple. A community must have a group of people. For this group to be considered a community, they must be united by values, beliefs, status or lifestyle. This principle makes communities exclusive. The word community is itself an acknowledgement of decency, and is withheld from the undeserving.³⁵ For instance, homosexuals struggled for years to create a “gay community” – a monumental achievement that established the equality and decency of gay people. Yet hoodlums, convicts and religious fanatics can never create a “community” nor join the “gay community”. They have gangs, mobs and cults.³⁶

A form of social organization that reflects inclusive values (rather than exclusive) is a tribe. A tribe is a group of people who pool their energies and skills to make a living together. A tribe’s members are not based on the requisites of their values or beliefs, but based on one simple rule of thumb – *Can you extend the livelihood of the tribe to include yourself?*³⁷

This principle allows for true variety of skills and knowledge in a social structure based on making a living.

Likewise, it dismantles the inequitable hierarchical system employed by social organizations that have abandoned the tribal culture and have embraced a civilized one. A tribal system expands and diversifies the values, viewpoints and attitudes of its members whereas a community narrows its social tolerance and exposure by creating rigid requisites for participation.

For instance, a “community” garden can be developed with the idea of stimulating social interaction in an area with several private garden plots. Clearly, social stimulation will occur simply due to proximal exposure and creating opportunity for interaction. To some degree, there will be new social connections that otherwise would never have occurred. However, this approach does not break the bounds of social classes, as it will only strengthen them. Soon, you will see the “middle aged office job weekend golf amateurs” create a small community through interaction at the garden, as will the young mothers, old retired folks, and free spirited environmentalists. Each of these small communities will be relatively exclusive to its members. These people are concerned only with their own investment in their garden plot, and under no necessity, are required to be involved with the success of his or her neighbor’s garden – once again, exclusion.

Now let’s consider a “tribal” garden. In this garden tribe, a person will be welcomed based on the aforementioned principle: *Can you extend the livelihood of the tribe (garden) to include yourself?* In this scenario, you may have a retired war veteran who is skillful in creating tools, a scientist who is knowledgeable in maintaining a healthy fertile soil for the garden, and a stay at home mother who is great at tending and caring for plants. This structure topples the bounds of social exclusion and hierarchy. When the scientist amends the soil with nutrients, he is important to the tribe and given respect, when the retired craftsman fabricates a tool which will make seeding more efficient, he is acknowledged, and when the mother of three properly organizes plant selection and harvesting, she is revered by her colleagues. Nobody’s responsibility and skills are more important than the others. The contributions of all of a tribe’s members are crucial to its output and success. This structure of social interaction greatly encourages associations with others that would otherwise be unlikely to occur. The various values, ideals and lifestyles exhibited by the members of this tribe will soon spread amongst the tribe, therefore expanding the principles of its members and the tribe itself. Because the members of the tribe are united by the idea of working together to make a living (rather than exclusive

social organization), there is no necessity for parceling and privatizing the landscape. The land is no longer a commodity or “resource” in a tribe, as it is a way of making a living – a source that anchors its members to the land and one another. This is how social organization, in accordance with relationship to the land, determines a sense of place, a sense of self identity, and a respect for self, others and the land.

THE RIGHT APPROACH

The way we view our world, our issues and ourselves is flawed. This is at the crux of our critical state. The fact that we even have the words ,“environment” and “nature”, is linguistic proof that we consider ourselves as a separate entity from the whole. The models for solutions to the issues we face are influenced by these partialities and our approach. For instance, the “model” for sustainability focuses on the three elements – social, environmental and economic issues. This, inherently, is yet another flaw. How can you separate these three entities? Society, economy, culture, lifestyle, health, beliefs – these are all subsets of the whole, or what we term “the environment”. By taking this approach, we view the environmental issues as external

– as something to remediate and mend in the material world. The “environment” is more than wilderness, mountains, rivers and birds. It is more than a pillar for a “sustainable” model. It *IS* the model. It is the whole. We ourselves are, what we term as, the “environment”. Our approach is unsound - we must mend ourselves.

To tackle the global scale “environmental” issues, including social and economic issues, hundreds of organizations and groups of people have attempted the top – down approach. This method emphasizes the solutions to the physical consequences and symptoms of environmental issues. For example, reforestation or erosion control projects. This typically means highly mechanized and typically multinational projects which attempt to relieve the “symptom of the disease”, rather than cure the cause. The significance of these projects are important, especially those that deal with direct rehabilitation of landscapes and the ethical stewardship by their rightful residents. However, in order to create enduring solutions, the changes must be made at the core of the problem – not focused only on the superficial outcomes. For example, a heart disease patient cannot expect to survive by living an unhealthy lifestyle and relying on annual bypass surgeries. The patient must change his or her lifestyle from the “bottom up” – eat

healthy, exercise, and avoid stress. Similarly, top-down approaches (repetitive bypass surgeries in this case) in environmental projects will only alleviate the symptoms of the issues, yet can never be a solution or cure. It is the bottom – up approach that will “cure the disease”, and the top – down approach that will buy us time.

A bottom – up approach is one that emphasizes values and ideology more than relieving the physical symptoms of a problem. This sort of solution focuses on restructuring the harmful elements that were discussed in the previous sections. Materializing these solutions is challenging, yet very adaptable. Solutions with this approach can be implemented into almost any project or system, because it is a philosophy - a set of concepts and ideas, rather than a rigid science part of a systematic process. For example, if you take the concept of a tribe and its elucidative properties, you can implement this idea into several types of systems – such as a business, family structure, education system, social relations, and design.

There are hundreds of ways to attempt “bottom – up” solutions. A typical quality of this approach is that they are on a local scale. The benefit of this is that it disproves the perception projected by civilization that there is only one way to live – the way of the civilized

culture (military dominance, economic growth, power struggles, imbalanced hierarchical structures, war, conversion of global diversity into homogenous human flesh, cancerous expansion and ignorance). As there is no absolute material answer to the environmental issues we face today, there is no one correct model to make a living. The diversity of the natural world is a testament to the reality of the variety of lifestyles that will be necessary to rebuild our world and ourselves. Yet our current system of living is dependent on the globalization and homogenization of the world, which attempts to deconstruct the stability of global diversity. This is exactly why successful approaches must start at a local and personal level that embrace the dynamics of the local landscape and successfully optimize its potential. A native of Mexico will have quite a different model of making a living when compared to a native of Scandinavia. Here in Davis, California, we have our own unique opportunities and constraints in making a living.

What bottom-up approach will work in the city of Davis and what is a beneficial way for us to make a living here? Again, there are a handful of correct answers to these questions. One proven success, however, is the establishment of gardens throughout the city. Although only a few of these gardens exist in the city, the “garden

plots per capita" in Davis is staggeringly high compared to most cities of similar size and location. These gardens have had a bright history of success. For instance, the 5th Street Gardens in the city of Davis has been around since the 1970s and has had perennial full occupancy. The demand for garden space is high, as the waitlists for the 5th street Gardens, as well as others, have grown to almost unrealistic lengths in the past few years (as many waitlisted as there are plots). The waitlisted folks may not get their plots anytime soon, but this is a very encouraging trend with an enormously valuable potential for the city. The bottom line - people want to garden here.

The benefits of gardening are endless. Aside from the abstract positives regarding mental and spiritual well being and landscape beautification, there are several economic and social benefits as well. Additionally, productive gardens encourage healthy local ecology as well as environmental enhancement and stewardship. Productive crop gardens can provide surprising budget relief for families or individuals in food costs. Producing your own food is not only healthier, cheaper and cleaner, but it significantly cuts down on the local "Food-shed". A food-shed is a theoretical term which encompasses all the resources and distances that are

required for the entire appetite of a community or a city. Shrinking a food shed is a very important step in achieving a healthy sustainable way of living.

As previously mentioned, gardens help build respect, kinship and unity with self and others. These social bonds have proven to provide safer communities, as studies have shown that neighborhoods with gardens have lower crime rates. Similarly, these gardens provide vital experience and wisdom to their gardeners about the natural world and demonstrate the value of plants, soil and people in a harmonious relationship. Gardening develops a sense of self and a sense of purpose, of being. It connects one with their landbase – a vital element in redeveloping our balance with nature and reconnecting us with our source. These attitudes eventually cycle in to help develop strong productive groups of people. This is a stepping stone in our shift from the culture of civilization to the culture of our future.

This is the opportunity of the Stongate Garden in West Davis. Part 2 of this thesis will attempt to use the concepts and approach discussed in Part 1 to create a conceptual design for the plot of unused land proposed for development.

HUMANITY'S NEXT SHIFT

“You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.” – Buckminster Fuller

Everything written in this thesis leads me to this point – It would be useless and unproductive for civilization to attempt to catapult itself back to its pre-agricultural culture in order to reestablish a healthy beneficial culture. This approach would be naïve and ignorant of the fact that the world is not the same as it was 20,000 years ago. We have changed the physical world, and have already crossed a threshold of no return. Returning to our pre-historical way of living is a potential shift that can only be actualized not by choice, but by the influence of a catastrophic collapse - a collapse that our current critical path is leading to. This is a very important point. If we do not change our culture, the way we make a living today, then we will be repressed by our own systems and designs back to the culture of our past, rather than that of our future. Due to the permanent changes we have made to the planet, this pre-agricultural lifestyle will struggle to survive.

“The tracks of our ancestors have been wiped away by the ‘Great Forgetting’. It’s not up to us to

replant their exact footprints, but to make our own, equally original tracks.” – Carl Cole

Therefore, we have a choice with a potentially bright prospect. Opening Pandora's box has brought an overabundance of detrimental elements to our culture. Yet, as the myth suggests, there is still something remaining in the box which will allow humanity to retrieve its well-being once again. There is much understanding of the physical world – far more than our ancestors had. Yet we have lost the sense of self and our role in our world that our insightful ancestors once nurtured. It is not up to us to reforest the forests we have cut down, refute and topple the scrounging conglomerate corporations who destroy our planet, recycle our plastic bottles, or to blow up the dams we have built (Don't get me wrong - these are all great things to accomplish and carry out). What our responsibility is - as residents of this world, as tenants of life, and as people of the human species – is to change ourselves. It is our responsibility to rediscover our role – to reconnect with our landbase, our planet and therefore, ourselves. It is time to become human – to become animal, once again. All beneficial material changes will follow.

PART 2

THE STONEGATE GARDEN PROJECT

PREFACE

Engineers will not save our planet. Geologists will not solve our energy “issue” (addiction). Physicists and astronomers will not discover a planet for human colonization. Our so called “leaders” will never lead us beyond civilization (as they are the king of kings who rely on the serfdom of our tainted culture). And I, as a landscape architect, cannot change humanity. People will have to change themselves.

However, I believe landscape architects do not give themselves enough credit. As reconnection with our landscape will transcend us beyond our infections, so will landscape designers always have the potential to facilitate our next shift. The design of our landscape is a paradox, as intense anthropogenic changes to the environment has led us to our critical state, we will have to “un-design” our surroundings in order to return to a habitual state.

The goal of the second part of this project will be to design a conceptual plan for an open space which can signify and advocate the theories discussed in part 1. Let us quickly review the proposed project and its existing conditions followed by a review of the themes, conflicts, and concepts that must correspond with the design.



UNDERSTANDING THE LANDSCAPE

"A society is defined not only by what it creates, but by what it refuses to destroy."

- J. Sawhill

PROJECT INTRODUCTION AND EXISTING CONDITIONS

As the city of Davis has expanded westward, several pockets of unused land have been developed. One of these pockets has been allocated to function as infrastructure protocol for flood prevention. Now serving as the Stonegate detention basin, this site acts as a receptive sink when stormwater levels (collecting at a retention pond between Davis and Winters, CA) becomes completely inundated and must expel excess water. This water follows a roadside channel and eventually reached the Stonegate detention basin, where it is temporarily held and absorbed. In extreme conditions, the Stonegate basin is completely filled and water must be channeled directly to the Yolo Bypass as a flood control measure. The channeling of water into the Stonegate basin is quite rare, and only occurs in heavy storm situations. The average interval between flooding is approximately every seven years. Even so, most of these floods are minimal – only partially flooding the basin.³⁸

The Stonegate detention area of West Davis has been a site of much interest in recent years. Due to its central location in the local neighborhood and relative large size, the site has been considered to be developed for a handful of purposes. However, due to its history and

primary purpose as a flood detention basin, many of these ideas have been unwillingly approached.³⁹ The most recent proposal for the site, however, has been taken into closer consideration. This is the proposal to build a community garden within a portion of the detention basin.

Several of the issues which discouraged previous developments still remain. Most importantly, the direct fact as well as all the subsequent results of the entire site functioning as a flood detention basin creates numerous constraints. All of these dynamics collectively quantify the restrictive environmental elements of the project. Although some environmental effects are not directly established by the detention basin (sunlight, for example), the eventual effect of these elements are determined by the hydrological dynamics of the detention basin.

In addition to environmental constraints, the element of social and neighborhood viability plays just as an important role. Being a garden that serves the local community, the project must be completely focused on the successes of a garden through neighborhood support and participation. Both external and internal social approval and support will help guide the eventual success of the garden.

The final goal of this thesis is to produce a conceptual design for a successful garden at the proposed site. It is, by no means, a final working plan – but rather a set of guidelines, elements and creative ideas that may help thrust the project forward. The design, as mentioned, has been preceded by theoretical research. Through the scope of the aforementioned principles, and with the forthcoming site specific data, a comprehensive framework may be developed. Therefore, the project will be approached by systematically breaking down the theoretical and site specific elements, analyzing the data, and finally restructuring the research and data into a comprehensive design.

Now, to the hard data.

NEIGHBORHOOD CONSTRAINTS AND SOLUTIONS

Clearly, the social facet of this project is crucial. Successful community gardens require community approval, support, participation and leadership. Understanding the opinions and demands of the local community, as well as those of potential participating members, will help determine a proper design approach.

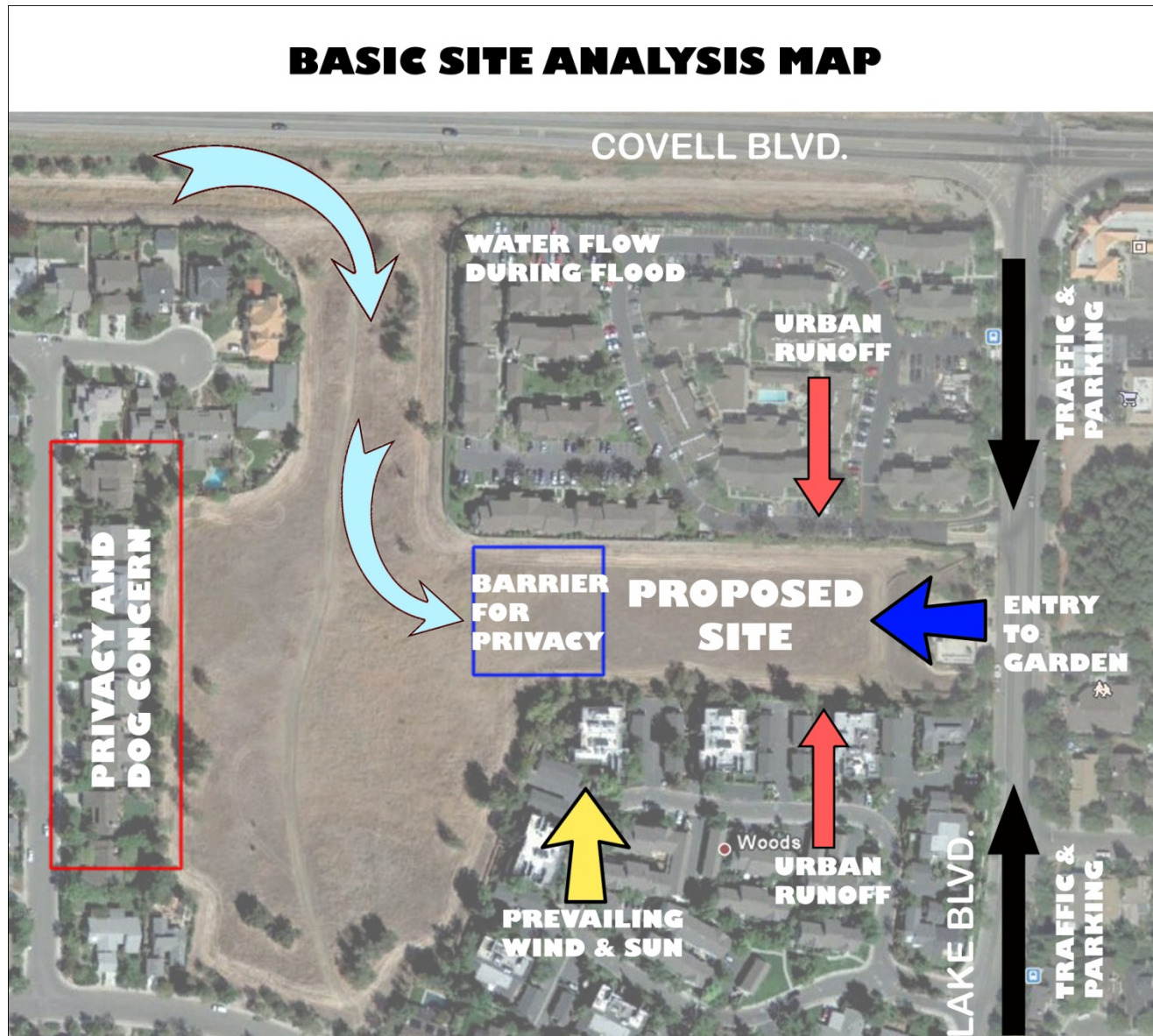
The most evident concern expressed by local residents was the issue of privacy and security.⁴⁰ These residents are concerned with the potential of a depressed basin serving as public land in an area where all fences are transparent (chain link). Likewise, as most of these residents are dog owners, they believe that there may be noise issues of dogs barking due to disturbances from the garden.⁴¹ These concerns are quite understandable and will be taken into consideration in the design.

As an adaptation to these concerns, the garden will have to comprise an inward, rather than an outreaching design – an unfortunate constraint to implementing an inclusive and welcoming conception of the tribal model. However, simply surrounding the site with 7 foot walls would be quite insipid and uninspiring. The proposition to develop a natural “layered wall”, which discourages trespassing and vandalism as well as upholds the privacy of local homes, will be an important design element. While acting as an obstruction, the layered wall will concurrently act as an aesthetic and recreational allure to passer-bys and other potential gardeners. It will enhance biological integrity and diversity within the garden and be a naturally living monument for all people to appreciate. Additionally,

the wall will have the potential to be productive, growing various fruits, herbs and crops.

Another concern was the quantity of traffic that would be generated by the garden. This, however, is a dismissible issue. The 40 years and running 5th street Gardens in Davis have had no issues with parking.⁴² As the 5th street Gardens have more plots and gardeners than will the Stonegate Garden, should not be concern. These

gardens primarily use street side parking, as has been similarly proposed for the Stonegate community garden. Traffic and parking should be of minimal concern, and will be successfully accommodated by the abundant street side parking on Lake Blvd. I hope our gardeners will choose bikes and sidewalks over automobile.



CASE STUDY – THE 5TH STREET GARDENS IN DAVIS, CA

It is very important to understand how a neighborhood garden works first hand. Being able to meet with Jane Shaffer-Kramer, the lead coordinator at the 5th street gardens, I was able to get a better idea of how these gardens work. The garden was established in the 1970s, when a handful of visionaries decided to propose the unused piece of city land to be developed into a modest garden. The project was approved, and in a matter of days, the garden was off to a booming success. Forty years later, the garden has seen perennial occupancy and ever-growing demand. In fact, the waitlist has never been higher. Today, there are almost as many wait-listed individuals as there are plots (over 100). This is an encouraging demand.

The garden is very simple - plots are in a grid layout with water provisions provided and piped by the city. The site surrounded by medium density office and industrial sites, including city offices. There are a total of 113 plots, most at 18'x20,' with a few half plots. Davis Community Gardens is sponsored by the City of Davis through the Parks and Community Services Department.

They city provides the land, water, some facility maintenance, and also some administrative support. Accessible through the city of Davis website is the Davis Community Gardens Packet which includes registration information, use and care of gardens, and notices and procedures. The annual fee is \$57 and there is a half plot option. On top of that there is a \$32 annual cleaning deposit, which is reimbursed when the plot is vacated and left free of weeds and debris. Registration occurs annually and materials are sent directly to residents. The city pays a part-time coordinator who is in charge of registration, inspection, enforcement, maintenance, and organization of group work days. A group of volunteer gardeners form an advisory board and they meet monthly to provide feedback and discuss issues. There is a series of policies with which gardeners are expected to comply. The policies can be looked at in greater detail. There are established procedures for leaving, being contacted, abandonment, and vacations all of which can be looked at in greater detail if needed. (Edwards)

Jane was able to show me some pros and cons about the garden. Clearly, the garden is successful.

However, due to site requirements, the garden is not allowed to be fenced and locked, and, therefore, there have been several incidents of thievery and vandalism. There have also been issues with gardeners leaving their plots vacant and not maintaining the garden, thus leading to weeds and unused land. This is, of course, an issue with privatizing the land through plots and leasing. Some time proven successes, however, include a healthy relationship with the city. This is, as Jane said, very very important. Jane discussed how city land has its political benefits for being used as a public garden, and thus, keeping a respectful and reciprocating relationship with the city is important to maintaining the garden.

ENVIRONMENTAL CONSTRAINTS AND SOLUTIONS

Soil

At the crux of the environmental stability of the site, as is in most cases concerning landscape production, is the soil. Soil fertility and quality defines the potential for vegetative production. Moreover, the various qualities of the soil will determine the potential for soil fertility (either existing or amendable). These qualities include but are not limited to: pH, salinity, texture,

structure, bulk density, drainage, nutrients and organic matter.

To provide a useful substrate for the garden, these qualities must lie between certain thresholds, and change dynamically with climatic conditions. Soil data regarding these qualities will help determine the possibility of the uses of the existing soil, and the potential requirement of importing soil for the garden.

Methods – Soil Sampling and Testing

Even designers have to get their hands dirty. In order to fully understand the soil at the site, a laboratory soil test is unquestionably necessary. This, in turn, is its own design element. Soil sampling, and subsequent testing, requires a thought-driven plotting of sample sites in order to compare various soil conditions throughout the site. It is acceptable to take one sampling of the entire site, but this may dilute the results and create inaccuracies.

In testing at the Stonegate site, four samples in two separate plots were collected. Due to superficially visible changes in soil, water, vegetative and solar conditions, the plots were divided into “Plot 1” – the extreme

southern portion of the site (making up roughly a 15% of the site) and “Plot 2” – the more expansive northern portion (making up the majority of the site). Within each

Based on the poor conditions of plot 1, and the relatively more improved of plot 2, it was clear that the garden would be situated toward the North. In addition to poor soil, the south lacked sunlight (due to large trees along southern border of site), had regions of heavily cracking soil, and impermeable areas with sitting water.

The four samples were taken and shipped to Clifford Low's laboratory in Watsonville, California for comprehensive testing. The tests revealed the following results:

Analysis - How to Improve the Soil Quality

Soil tests have revealed that the soil will be the most challenging part of preparing the site. In a “Storie Index” rating of soil (similar to that of a 0-100 scale grading system), the existing soil, a Pescadero clay, rates a 14 out of 100. In other words, very poor. The interesting part about cultivating poor soil is that it may, perhaps, contradict the philosophies of Part 1 - *Human Landscape Coherence*. In order to cultivate soils, such as this Pescadaero clay, amendmants must be made in a

plot, two samples were taken based on the shallow and deep rooting zones for plants. These were at 0-10 cm and 10-25 cm depths.

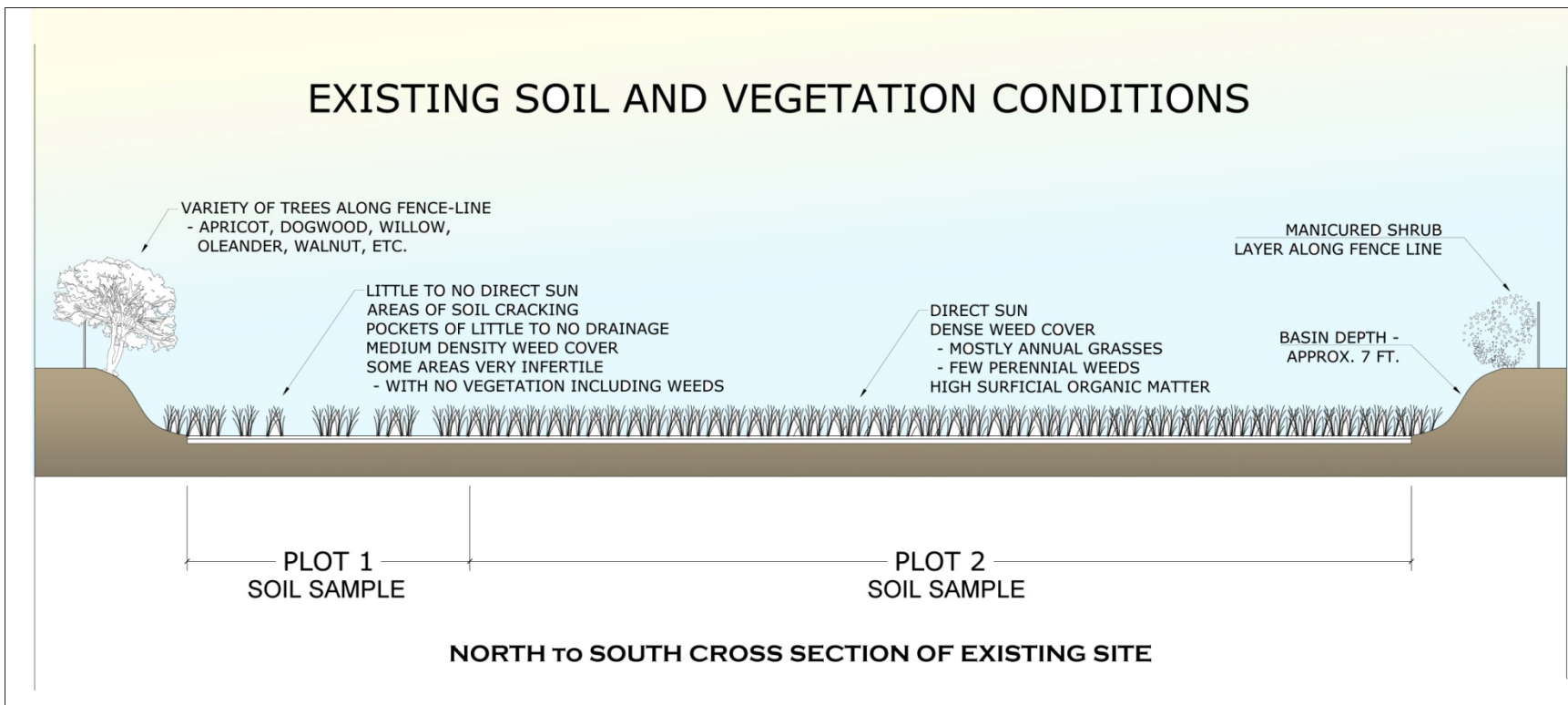
mechanized manner. This is a conflict in which the ends must justify the means. Here is the analysis of the data.

The pH of the soil is very high. Extreme pH limits plant selection, as it restricts growth for many species. pH determines the availability of certain nutrients to plants. In the case of a high pH (basic) soil, Phosphorous and several important micronutrients become highly limited.⁴³ Phosphorous, a crucial nutrient to plant growth, becomes relatively unavailable in soils with pH above 7.5. The soil of the Stonegate detention basin has a pH well over 8. Thus, it will be necessary to lower the pH.

A delicate way to lower the pH in a soil is by adding decomposed organic matter - compost.⁴⁴ This works by binding organic matter to the soil surface. This creates less opportunity for base cations (Ca, Mg, K, etc) to bind and remain in the soil. The organic material works in another beneficial matter by binding together aggregates of soil, improving the structure and, therefore, drainage of the soil. The improvement of drainage and removal of base cations that cause high pH provides the opportunity for the cations to be leached and flushed out (by irrigation or precipitation).

Amendments are typically necessary to lower the pH soils with levels such as the soil at the Stonegate detention basin. Specifically, the addition of elemental sulfur will help.⁴⁵ Sulfur amendment acidifies the soil, and helps leach residual salts that are characteristic of the soil at the Stonegate detention area – similar to using compost.⁴⁶ The very high salinity of the soils at the Stonegate detention area result in a deficiency in plant growth, yield and selection. Results show that the soil is very high in salts. Reducing the pH will help flush out

and dilute these salts to provide a more fertile soil. Additionally, reducing the pH will help make important micro-nutrients available to plants, such as Zinc, Copper, Manganese, and Iron.⁴⁸ Therefore, it will be important to ameliorate this soil attribute to accommodate a potential garden.





June 3, 2011

cc: Loren Oki

Chemical analyses on samples received:

May 31, 2011

Sample Identification	pH saturated paste	Electrical Conductivity dS/m	Nitrate Nitrogen (N)	Ammonium Nitrogen (N)	Phosphorus (P)	Potassium (K)	Calcium (Ca)	Magnesium (Mg)	Sulfate (SO4)	Boron (B)	Zinc (Zn)	Copper (Cu)	Manganese (Mn)	Iron (Fe)	SP Saturation Percentage	Calcium plus Magnesium	Sodium (Na)	Chloride (Cl)	SAR Sodium Adsorption Ratio	ESP Exchangeable Sodium Percentage
		Saturated paste extract	RESULTS REPORTED IN PARTS PER MILLION OF DRY SOIL												milliequivalents per liter in extract					
General Guidelines-Ornamental Plants	6.5-7.2	1.0-3.0	25-75	25-75	50-100	150-300	2000-4000	150-500	25-500	0.5-1.0	2.5-5.0	1.0-3.0	10-25	25-100		>6.0	<3.0	<3.0	<8.0	<9.0
Plot 1,																				
0-10 cm	8.2	1.2	3	7	17	165	4100	2625	320	1.9	1.2	5.8	26	65	68	2.9	7.8	3.2	6.5	7.3
10-25 cm	9.0	2.2	2	5	22	125	3700	2485	1109	10.4	0.8	5.7	17	57	105	2.9	21.9	6.4	18	20
Plot 2,																				
0-10 cm	8.3	1.4	5	5	17	135	4000	2175	309	2.3	1.6	5.1	17	55	72	2.7	12.1	5.4	10	11
10-25 cm	9.6	2.1	2	2	38	110	3600	2045	1123	9.8	1.0	5.5	5.9	43	126	4.9	14.9	6.8	9.5	11

	Organic Matter (% by Weight)	Lime Content % Ca CO3	Mechanical Analyses, % by weight, USDA Classifications				Texture
			Sand	Silt	Clay		
Optimum Values	>5.0	<3.0					
Plot 1,							
0-10 cm	5.9	4.4	14	58	28	silty clay loam	
10-25 cm	5.1	4.9	10	46	44	silty clay	
Plot 2,							
0-10 cm	6.1	3.4	16	58	26	silt loam	
10-25 cm	4.8	4.9	8	30	62	clay	

Respectfully submitted,

Clifford B. Low, M.S.

The next challenge is coping with the texture of the soil. Tests show that the soil is a very fine clay texture. The issue with fine clays, especially in a drainage basin, is that it has very poor drainage. This poor drainage is what facilitates the accumulation of salts in the soil.⁴⁹ Texture is a property of soil that cannot be synthetically modified – but naturally changes very slowly over eons. Amendments can, however, improve the structure of the soil. Improving the structure of the soil increases drainage potential and promotes biological activity. With a balanced gypsum and elemental sulfur addition to the soil, the pH can be managed to a crop-friendly level, as well as improve the soil quality and reduce salts. It is recommended to add sulfur in the Fall prior to rainfall to help leach the salts during the wet winter, and amend the gypsum in the spring to build soil aggregates that improve the structure and drainage of the soil.⁵¹

The overlying issue with attempting to lower soil pH and leach unwanted elements at this site is that the poor drainage of the soil severely limits the removal and leaching potential. Once again, it will be necessary to use fabricated materials to assist drainage. French drains and biopores are design elements which help further

within the soil (among other benefits). By adding organic matter, such as compost or manure, into the soil, microbial activity is promoted within the soil, and thus the structure and drainage are improved. Similarly, adding calcium (by the amendment of gypsum) into the soil significantly helps improve the structural quality of the soil.⁵⁰ Yet, this process must be taken with caution, as adding gypsum increases soil pH. The existing soil of the Stonegate detention area is very high, and in this case, gypsum must be amended to the soil conservatively.

improve the drainage of the soil. This improvement will help facilitate the removal of leached salts following the addition of sulfur into the soil. Biopores are deeply augered holes (about 2 meters) that promote biological activity while helping improve drainage in finely textured soils. Biopores are inexpensive, simple to install and can directly process organic matter from the garden into compost – simply by placing organic material into the augered hole. French drains are perforated pipes placed below the soil surface. These pipes fill with water as subsurface water drains slowly, thus, assisting in the removal of excess soil water.

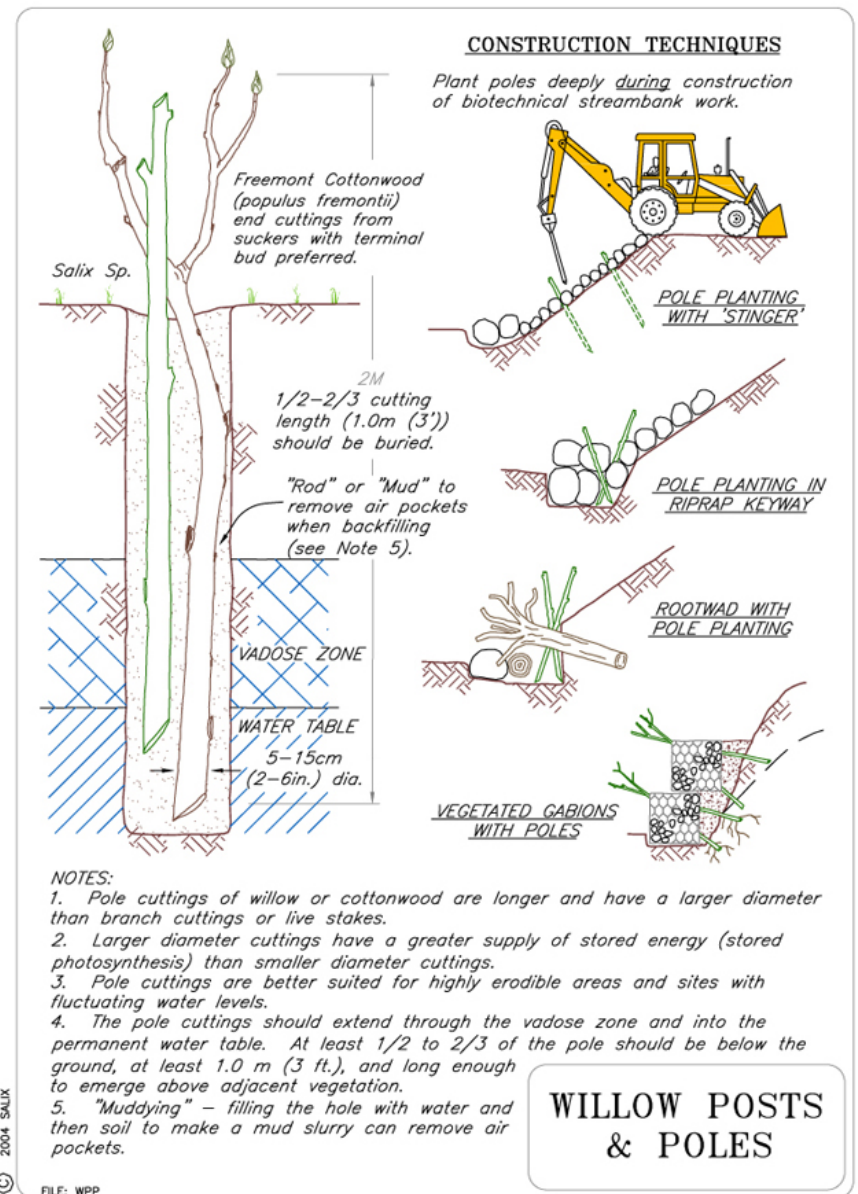
Key available nutrients are quite low in the soils tested at the Stonegate detention basin (Nitrogen,

Phosphorous, and Potassium). NPK fertilizer can help improve this deficiency. However, the soil retains relatively high organic matter (about 6%) which can be mineralized by soil microbes into nutrients that become available to plants. Promoting biological activity in the soil will be important. This can be done by following the methods previously listed. Providing carbon rich organic matter, such as compost and manure, will help promote biological activity.

Sun and Wind

Yolo county experiences prevailing winds from the South. This is a difficulty in a garden because planting large trees as wind blocks on the south side causes a reduction in necessary sunlight penetration. The south side of the Stonegate garden design is designated as a mini drainage swale for the entire site, and will, therefore, have a descending grade into the swale. To accommodate both bank stabilization of this swale and wind block from south prevailing winds (while not limiting sun exposure to the garden), willow plantings will be placed along the border between the swale and garden. Willows are vigorous sturdy shrubs that remain relatively low to the ground. Willows are very inexpensive

and simple to propagate, as they are a clonally rooting species. Clonal, or rooting, plant species propagate



through their woody material, and, create clones by rooting this material. To plant a willow, it is as easy as pruning a live branch from a nearby willow tree and placing it into the soil. Rooting hormone may be added to promote rooting of the planted branch shoot.

(Image taken from SenSS Streambank Stabilization by John McCullah)

Many *Salix* (willow) species are native to California riparian habitats (*Salix goodingii*, *laevigata*, *exigua*, etc). They are adapted to flooding and inundation, and will, consequently, do very well in a detention/swale area that experiences flooding, like the Stonegate detention area.

Again, a critical resource to the garden is sunlight. Crop gardens, for the most part, need relatively full sunlight in order to produce effectively. This is an important consideration in the design process. The geometry and layout of the existing site demonstrates low sunlight potential in the south, and that of the proposed design will attempt to maximize sunlight where necessary.

In the design, almost all woody vegetation is planted to the North of the crop gardening sites - aside from the partially translucent foliage of willows acting as

bank stabilization and wind block, which are south of the garden sites. This maximizes solar exposure, especially in the crop garden beds.

Vegetation and Weeds

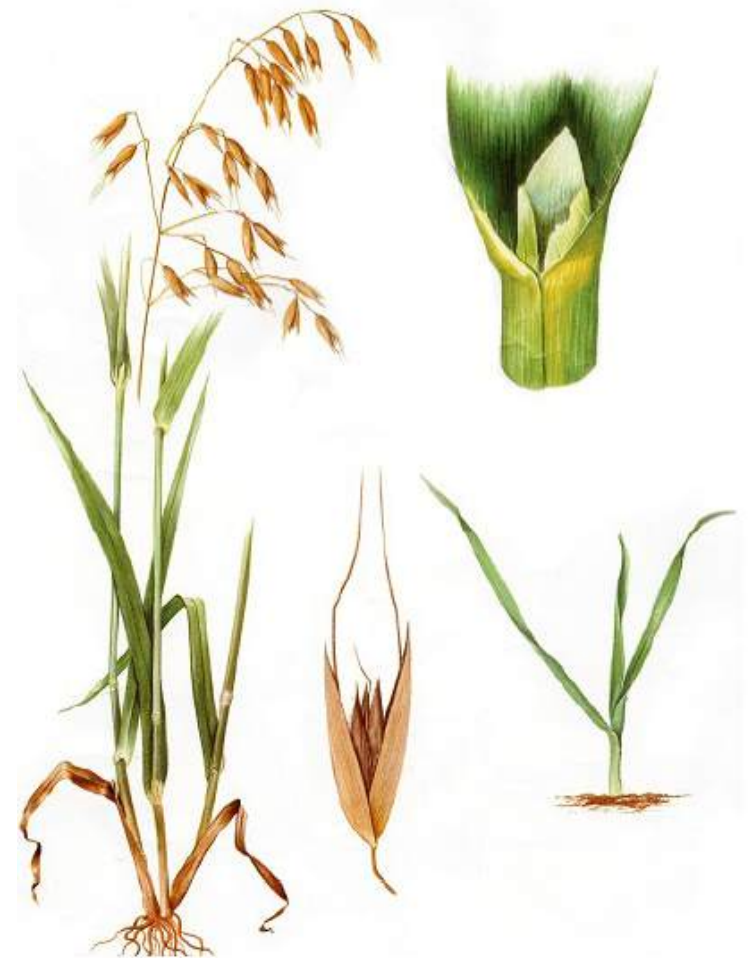
Existing vegetation proves to be another constraint. Aside from the handful of small trees bordering the south edge of the site, the entire site consists of grassland weed species. Italian Rye (*Lolium multiflorum*), a common noxious annual grass weed of California, is the primary resident of the site. Other sparsely distributed annual grass weeds include Wild Oats (*Chasmanthium latifolium*) and Ripgut Brome (*Bromus diandrus*). These are very typical California invasive grassland species. Aside from these annuals, there are primarily two perennial weeds - Pepperweed (*Ledpidium latifolium*), and Curly Dock (*Rumex crispus*) – two very problematic species. Let's take a look at each species.

Lolium multiflorum



Otherwise known as Italian Ryegrass, is one of the more difficult invasive grasses to manage. Lolium tends to be unpredictable when it seeds and germinates, making seasonal management unreliable at times.⁵² The predictability of the seasonal seeding and germination at the Stonegate site may be questionable because Lolium is only somewhat consistent in non irrigated sites. Although the site is unmanaged, the Stonegate detention area floods sporadically, making the germination dynamic potentially inconsistent. Fortunately, however, Lolium multiflorum derives from a short lived seed bank.⁵³ Continuous mowing and/or grazing with restored vegetation and mulching will help remove this weed.

Avena fatua



The second most abundant invasive annual grass, otherwise known as Wild Oats, is similarly a common weed in California. Avena fatua produces extensive root systems in which even some seemingly dying plants may persist through the winter.⁵⁴ Wild Oats does not spread rather rapidly, as the seeds disperse in relative close

proximity without disturbance. However, this weed thrives on distribution by way of animal and disturbances such as floods, mud slides, and artificial movement / adjustments to the soil.⁵⁵ The seed has an ingenious method of augering and sowing itself into the soil by expanding its spiraling body at first contact with water and thus screwing itself safely into the shallow substrate. This weed is more predictable than the Lolium, as it typically germinates in late Fall or early Winter. However, the seeds are longer lived and more resilient in the seed bank, and thus may establish itself in areas where Lolium has been eliminated. This will be a potential that must be considered during the process of preparing the site for the garden.

Lepidium latifolium

The infamous Perennial Pepperweed – a noxious invasive broadleaf that has devastated a wide range of California habitats. Lepidium is highly tolerant of stresses, thus explaining its wide range of sites invaded.

Pepperweed tolerates saline and alkali sites quite well – both characteristic of the soil at the Stongate detention basin based on soil test results. Once established, pepperweed spreads and takes over extremely quickly.



Pepperweed propagates through seed and root. When given any opportunity, such as unvegetated soil and disturbed sites, pepperweed will take over. Therefore, it is very crucial to eliminate

pepperweed first, before it is well established, and before other weeds, such as the annuals, are cleared.⁵⁶ Once established, pepperweed is practically impossible to completely eliminate and ultimately becomes a recurring management ordeal. This is priority number one for weed management at the Stonegate site.

How to Eliminate the Weeds and Prepare the Site

Chemical herbicides have been a typical method to manage weeds. Contrary to common belief, almost

all commercial herbicides are less hazardous to human health than table salt. (However, one could argue the surprising hazards of table salt to humans, however). In the case of the specific weeds at the site, and probably the main reason why these are the species at the site, is that they are almost all Glyphosate⁵⁷ (Round Up) – resistant. There are, however, a couple herbicide options to deal with these weeds. It will be important to eliminate the broadleaf perennials first (Lepidium and Rumex). An effective herbicide for these species is Triclopyr⁵⁸ – a chemical designed specifically for broadleaf weeds. As for the annual grasses, Sythoxodim (primary ingredient in “Grass-B-Gon”) will do the trick.⁵⁹

Using herbicides is a touchy subject. A couple weed scientists can go head to head arguing the legitimacy for an herbicide or herbicide-free approach for hours and get no where. Notice there is no suggested opinion from my part. Now let us take a look at the other option.

Weeds can be managed without chemicals. However, when dealing with a large site like the Stonegate detention basin, this typically means more expense, and requirement of heavy machinery. In order to deal with these weeds, we must understand how they physiologically function. Annual grasses reproduce by

seed every season. To germinate and survive, they rely on the release of high volumes of fertile seeds. These seeds either germinate, submerge and lie dormant in the soil, or die. Clearly, if the seed germinates, the grass will return the following year. Similarly, if the seed dies, there is no chance for it to survive. What we are most concerned with, in weed management, are the dormant seeds beneath the surface, otherwise known as the seedbank. The living (or dying) grasses can be mowed, and thus eliminated. The patient seeds lying in the seedbank thrive on this disturbance and germinate from sun exposure to the soil surface from the cleared site. Thus, in order to eliminate annual grass weeds, one must remove the existing living grasses, as well as its seedbank.⁶⁰ To do this, continuous mowing, most effectively timed just prior to seeding, must be carried out seasonally. As the infertile grasses are continuously removed, the seedbank germinates and repopulates the landscape. Eventually, however, the seedbank is depleted⁶¹, and management of the annual grass weed becomes realized.

Managing broadleaf weeds, such as the Lepidium and Rumex, work in a different yet similar way. Broadleaves can propagate by seed, but have vigorous root systems which help one specimen to quickly and

vigorously establish in an area (especially the pepperweed). In similar fashion, broadleaves must be continuously “mowed” or chopped to the surficial root. The weed will return from the same point at which it was cut, and the battle against the weed may seem hopeless at this point. However, by repeating this process (at about every 3-4 weeks), the weed is slowly losing its vigor.⁶² When it is regrowing the plant biomass that was removed, the broadleaf weed is forced to transfer energy from its vigorous roots into its necessary surficial vegetative regrowth. Eventually, this persistent removal leads to a weakened state of the weed and thus can be ultimately removed or easily killed with light / organic herbicides.

Once the existing weeds of the site are relegated to a maintainable population, organic herbicides (such as vinegar), hand weeding with tools (such as a “Weed Hound”, and mulching with organic material (such as hay or bark) will make future management relatively easy and cheap.

It will be important to create a detailed management plan for the weeds at the Stonegate detention site. Using these guidelines and consulting a professional will make this setback an issue capable of managing.

In such case, a detailed list of management methods are available and relatively easy to administer to decrease and eliminate resprouting of these weeds. The small colony of Pepperweed (*Ledpidium latifolium*) is growing along the western border of the site. Not only is it a very invasive weed, but it is also very difficult to eliminate. Fortunately, however, the change in soil along the western border seems to have deterred invasion into the proposed site – for now. There is, however, a possibility of invasion following soil amendment or importation. This invasive potential must be considered as a high priority.



Finally, the significance of the flood regime of the site is unmistakable. The designated function of the site is a flood detention basin. Approximately every 5-10 years, a larger retention basin “upstream” from the Stonegate detention basin is completely inundated following a storm event, and must expel the excess water into the Stonegate basin temporarily. Typically, the detention level is quite minimal (about 1-2 feet full). However, in extreme cases, if the Stonegate basin is completely inundated, the water is channeled from a leveled weir directly into the Yolo Bypass. This extreme event has occurred once in the history of the detention basin. As the city requires a “no change to the hydrograph” policy with the detention basin, the design of the gardens will attempt to embrace this flood regime instead of fight it.



FROM THEORY TO REALITY

REDESIGNING OURSELVES THROUGH THE LANDSCAPE, AND MATERIALIZING
THE THEMES, CONCEPTS AND CONFLICTS OF LANDSCAPE COHERENCE

"Do not wait for extraordinary circumstances to do good action; try to use ordinary situations."

— Jean Paul Richter

DESIGN OF LANDSCAPE COHERENCE

By this time, I am sure you have heard enough about reconnecting with our landscape, but it cannot be emphasized enough. It will be important to exhibit this idea in the design process. How will it be possible to emulate the equilibrium of natural systems and encourage the human element to this system? This is a question that must be solved in the design.

Fundamentally, planting a crop garden cannot be truly considered as “reconnecting with the land”. As discussed with Jane from the 5th street gardens, most gardeners at her site use the rented plots as a “fix” to escape the stresses of everyday life. This typically means gardening in quiet isolated privacy, and communicating to neighbors in a comparable state of mind. Surely, I am not suggesting that the 5th Street Gardens, or those that are similar, are erroneous. What I am suggesting, however, is that improvements can be made by rethinking the design.

The elementary issue with “community” gardens is the privatization of space. At the end of the day, these plots end up acting as extensions of the backyard – parceled off to create pockets of disturbed fragmented landscapes that discourage the advantages of larger

heterogeneous patches. Landscapes function holistically better when understood as a whole - embracing the efficiency of the larger system. For example, cultivating a larger, more diverse, landscape allows the gardener to take advantage of existing natural elements (such as sunlight, wind, soil condition, beneficial plants/insects/animals, etc), and thus increase efficiency as well as promote higher ecological benefits. Parcels disallow this fundamental advantage of nature's blueprint. Parceling also means a homogenous landscape that consumes much more space for production. Because parcels are less efficient, more parcels (and therefore space) are needed for equal output.

The Stonegate Garden conceptual plan will, thus, utilize a “no-parcel” system. In understanding this idea, an effort to maximize space efficiency is vital. One suggested concept to do this is the idea of “Keyhole Gardening”. Keyhole Gardening is relatively simple, and demonstrates a fresh efficient idea which maximizes garden access, space and convenience in a simple alternative to standard rectangular raised beds/plots. (See image 2-1) In the Keyhole concept, various raised beds are laid circling a keyhole-shaped central area. Based on the necessity for maintenance level, each crop

type is placed in a specific bed. For instance, the bed directly adjacent to the keyhole will be planted with daily high maintenance plants such as spinach and other greens. In contrast, low maintenance plants, such as cabbage, will be planted in the third bed, where access is not as consistently required. Just surrounding this final bed is a layer of perennial and self seeding crops that are very low maintenance, and are, essentially, only encountered for harvesting. These plants, generally, propagate themselves and require almost no maintenance. The keyhole plan is a response to the typical fragmented parcel layout, and will help the Stonegate garden maximize its cultivating land use.

Minimizing the use of land for cultivation leaves room to do other things. In accordance with the “Layered Wall” concept previously discussed, a connection between these “forested” woodlands would be an ideal opportunity to exhibit the concept of “Forest Gardening”. This idea, developed by Robert Hart, uses the symbiotic advantages of forest layers to create or restore woodland habitats while providing fruits, vegetables and nuts in a low maintenance system – emulating our foraging history. There are seven primary layers in a forest garden that each provides habitat and food for the entire ecological system. (See image 2-1

and 2-2). The idea of having a self maintaining forest that provides food is parallel to the foraging methods of our past. Perhaps by rediscovering this approach, we can realize a closer connection with our landscape.

RETHINKING THE FALLACIES OF AGRICULTURE

Agriculture is, in fact, inefficient, destructive and can never maintain humanity nor the biological world. It is, however, an ingenious discovery which we have adopted, and have acquired much knowledge from. The goal will be to use this knowledge in a safer, more holistic way. This idea is parallel with the theory of “Permaculture”.

Permaculture includes many ideas and skills that are not unique to it. Techniques in farming, simple technology and science help build different permaculture techniques. It is unique, however, in that it is modeled closely with ecosystems, which benefits the whole landbase, rather than exploiting it.

Keyhole gardening and Forest gardening are an adoption of permaculture ideas. Another one of these ideas, that may seem more familiar to agriculture, is the beneficial use of domesticated animals – in this case,

chickens. One may argue that the use of domesticated animals (chickens) demonstrates an association with agriculture, and therefore goes against the model for change in agriculture. Perhaps, but let's compare a permaculture chicken with an agriculture chicken. On an industrial farm – the mainstay of modern agriculture – chickens are fed grain that is grown with the use of heavy machinery, artificial fertilizer, and poisons – all requiring huge amounts of energy. Unnatural protein supplement, such as soya, is added to the feed grain – which is supplied by poor countries (i.e. Brazil) where the malnourished protein deficient impoverished workers are obligated to process these supplements in an unjust serfdom on deforested virgin lands. This grain is processed in massive mechanized mills. Water, and energy is all pumped into these “battery house” farms in which no accordance with the natural system is even remotely attempted. I will refrain from even mentioning what they do with the bodies of these chickens.

Now let us consider the permaculture chicken. These fowl have much of their food grown for them where they live. The “chicken run” is planted with trees and shrubs which produce seed or fruit which is edible to them. There is no transport or heavy energy costs. Supplemental feeding may be necessary at certain times

of the year, but can be reduced in an efficient design. Chickens do well with both perennial trees and shrubs, and annual wheat grasses, vegetable crops, and orchards. All are low maintenance crops, and, therefore, so are the chickens. Chickens play a beneficial role in maintaining pest levels, as they forage on insect pests when let out into the garden. Another innovative yet simple association is the idea of a “Chicken Greenhouse”. By attaching a chicken house to a south facing greenhouse, the two productive buildings passively support each other. The body heat of the chickens keep the temperature up in the greenhouse at night, while the greenhouse helps keep the chickens warm on a cold winter morning – no need for artificial heating of the greenhouse. Additionally, the carbon dioxide produced by the chicken enhances the ability for plants to grow in the green house. (See Images 3-1 & 3-2)

The application of industrial agriculture does not acknowledge the advantages of undisturbed ecology. The method of this application is to completely clear the land for cultivation of crops for people. This is, once again, the idea of converting the naturally distributed biomass of the wild into pure human flesh. It would be inconsistent for the Stonegate garden design to attempt

to cultivate all of the available land without recognizing the benefits of the natural system. As the “Forest Garden” will act as a wholesome association with local ecology – by providing sustenance to people as well as all flora and fauna- the “Floodplain Meadow” will help serve as a flood sink during the detention basin’s flooding regime while serving as beneficial habitat for other plants and animals.

UNITY THROUGH DIVERSITY

The suppression of diversity is a primary reason why the world is in a critical state. No living organism has ever colonized the planet the way we have, and nor has any suppressed the flexibility of diversifying to adapt to local conditions. How is it that we believe there is only one way to acquire nutrition? One way to organize our social structure? One way to make a living? Only one culture. Reestablishing diversity is crucial.

Physically, the suggested design elements – keyhole beds, forest gardening, the floodplain meadow and the greenhouse-chicken coop – promote diversity by encouraging biological activity and presenting the opportunity for a wide range of plants to grow in a relatively small space. Additionally, the range of

microclimates and habitat offered by these elements (keyhole beds for crop gardening; forest garden for forage and nutrient cycling; greenhouse for exotic plant cultivation; chicken coop for eggs, meat and controlling pests; the layered wall for herbs and edible flowers; and the floodplain meadow for grain and flood management) will supply healthier more diverse nutrition. Yet, diversity is more than physical.

Diversity starts with tolerance and leads to a range of accessibility and acknowledgement. It is learning from others, and subsequently, learning yourself. This is upheld by the “no-parcel” design. Abolishing parcels will help gardeners interact and work together – to make a living together. As they are interacting with the landscape together, they will slowly realize they are becoming an interdependent tribe of gardeners. These connections are what will create the inclusive relationships between self and nature, self and others, and self to self. Diversity creates unity.

OUR TRIBAL INHERENCE

If someone asks you: Does the pack lifestyle work for wolves? Does the herd lifestyle work for buffalo? Does the migratory lifestyle work for swallows? The

answer would be yes. So why is it so hard to understand that the tribal lifestyle works for humans? Similarly – Why the civilized lifestyle does not? Again, it is not up to us to drop our 10,000 year history and attempt to imitate the few remaining veritable tribes in the world. It is, however, important to understand the remedial and suitable ingredients of the tribal life and implement it in our everyday lives.

The tribal model is, again, discouraged by parceling garden space for privatization. Eliminating parcels in a cultivation operation is similar to a “community farm” model – except the Stonegate Garden is not a farm. This garden is more than about using the entire landscape as food production for people. It is about rethinking our role in the landscape and reconnecting with our responsibility. As efficiency and biological production is greatly improved by using the whole of the landscape, so is the social structure of the participants. In a tribal model, there is only one requisite – can you extend the livelihood of the tribe to include yourself? In the case of the Stonegate Garden, this is translated into – by volunteering your time to help, manage or cultivate the garden, we will help you “make a living” by providing garden access and produce. This, again, allows people from all socio-economic and skilled

backgrounds to participate and be a beneficial “tribe member” to the garden. There are no obligations, or monetary deposits, which allows people to participate at their own will. This encourages those with aspiration to help and participate, creating a welcoming environment for gardeners to interact. It encourages, for instance, the homeless “community” to volunteer and learn at the garden, thus deposing the exclusiveness of their “community” and integrating them into the diverse people of the tribe. The same thing can be said about the middle class, rich, young, old, experienced, novice, religious, scholarly (the list goes on) volunteers who will come to recognize and acknowledge the offerings of all groups of people.

LEARNING FROM OUR PAST – ENVISIONING OUR FUTURE

I have shown a considerable amount of unfavorable partiality to the way we live today, the agricultural system, civilization, and our culture. Similarly, I have clearly demonstrated my belief in our pre-agricultural past; a lifestyle that took us millions of years to develop – one that lived with the cycles of the world. The thought process in the design phase will embrace both our pre and post – agricultural histories. It is ignorant

to believe we can “drop it all” and return to Paleolithic life. We must learn from our entire evolutionary history and move forward in a newly adapted way.

It is clear that many of our ancestors did, in fact, live healthy lives that were less laboriously demanding than ours today (with exceptions, of course). Increasing the nutrition and diversity in our diet, instead of relying on a handful of unnourishing starchy crops, is a part of this. Accepting the issues of our globalized industrial agricultural system, instead of glorifying it, will promote people to start growing local, and trying new foods. The Stonegate Garden offers this possibility.

We must allow natural systems to reestablish themselves and integrate into our systems. It is from our past that we must adopt the value of ecology, but our future from which we must understand how to reinstate it into our lives. Highly productive landscapes integrated into the holistic ecological system will be important to reconditioning this. The Stonegate garden attempts to do this through its design elements. The design maximizes efficiency in a modestly low impact cropping system while enhancing the biological elements of the whole. It rebalances the equilibrium of energy allocation – designed for all the biotic members of the habitat. It is important for us to understand how our social structure

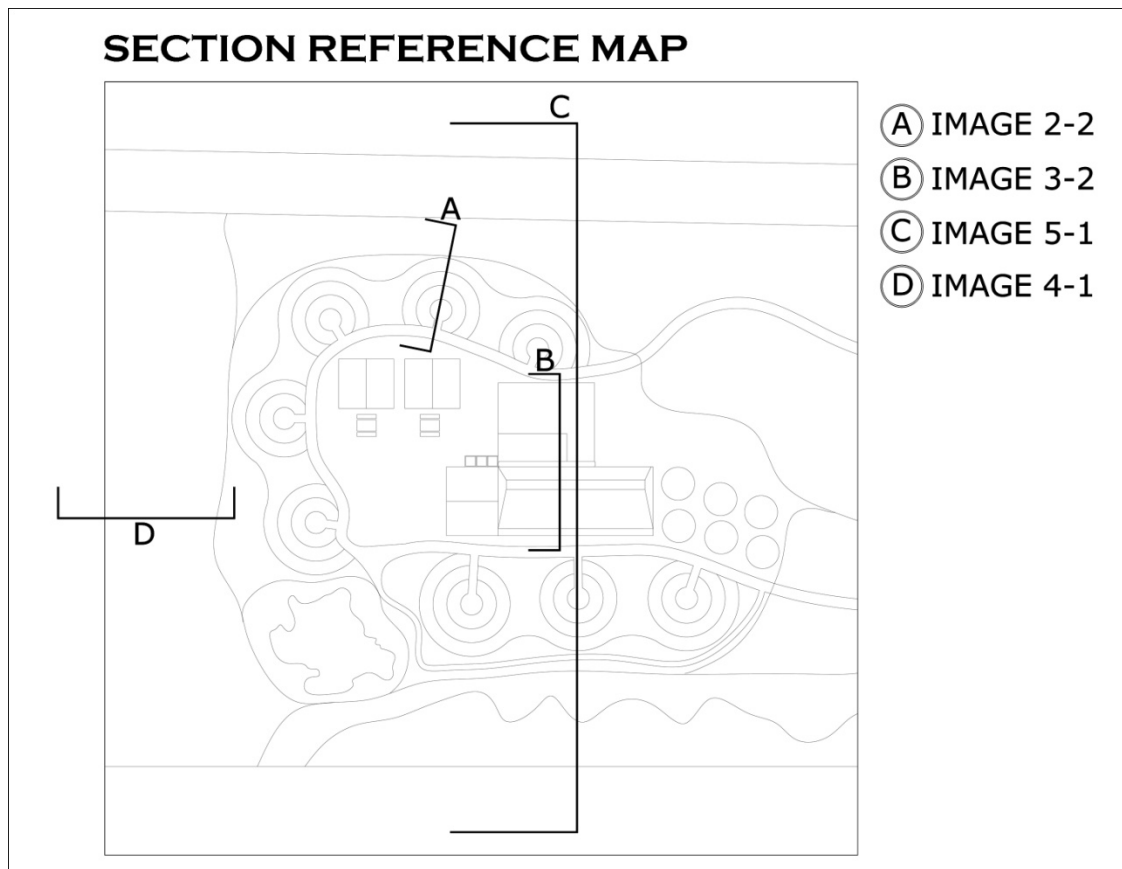
worked in the past, and why our civilized structure today augments the growing void between people and their environment. It is an ambitious feat to topple this structure and rebuild one that amends humanity back with with itself. Yet, it is a process that is undeniably necessary to move forward into what we refer to as a “sustainable” future.

THE DESIGN

DESIGN IS A STREAM OF ABSTRACT CREATION, FLOWING FROM *THE SOURCE OF SELF DISCOVERY*, THAT IS SYMBOLIZED ON THE CANVAS OF THE MATERIAL WORLD.

The following illustrations are conceptual design images for the Stonegate Garden Project. The illustrations are by no means intended to represent a final layout or working plan, but rather a set of design elements and principles that are assembled in just one of the many possible functioning arrangements. Any references to images are in this section.

Below is a reference map to clarify illustrated sections in the following pages.



CONCEPTUAL LAYOUT PLAN

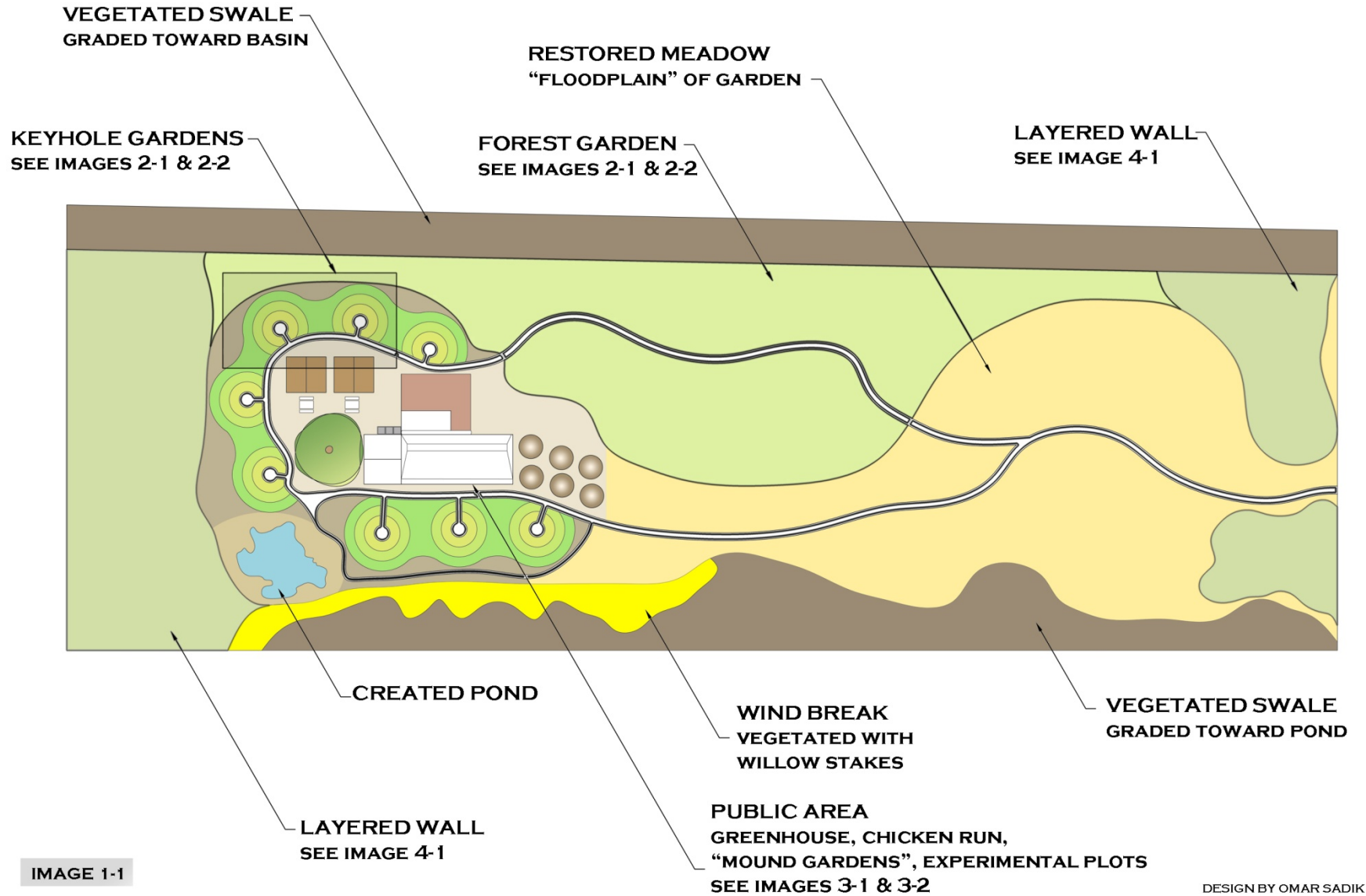


IMAGE 1-1

DESIGN BY OMAR SADIK

THE GARDEN MOSAIC

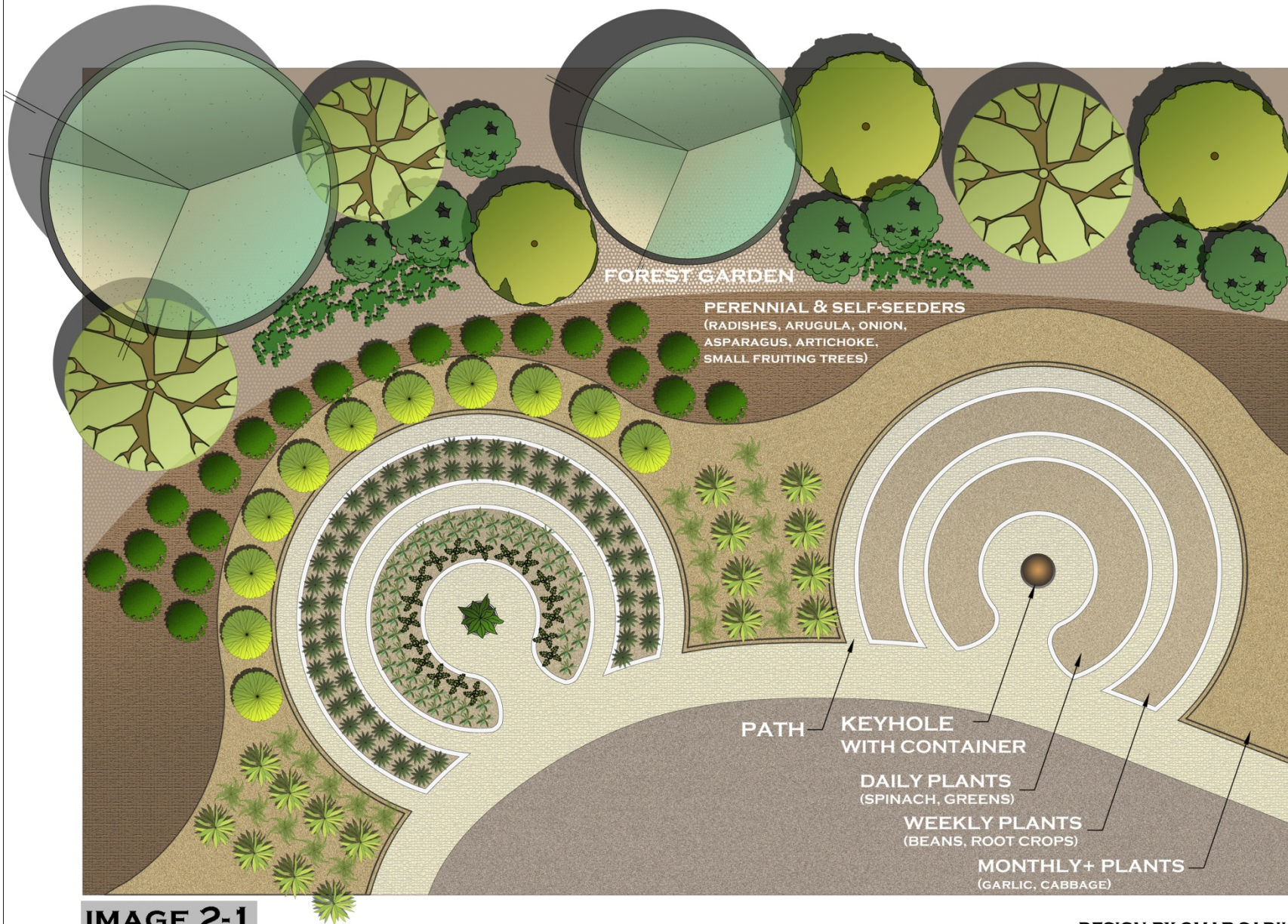


IMAGE 2-1

DESIGN BY OMAR SADIK

THE 4 LEVELS OF THE KEYHOLE GARDEN

THE 7 LAYERS OF THE FOREST GARDEN

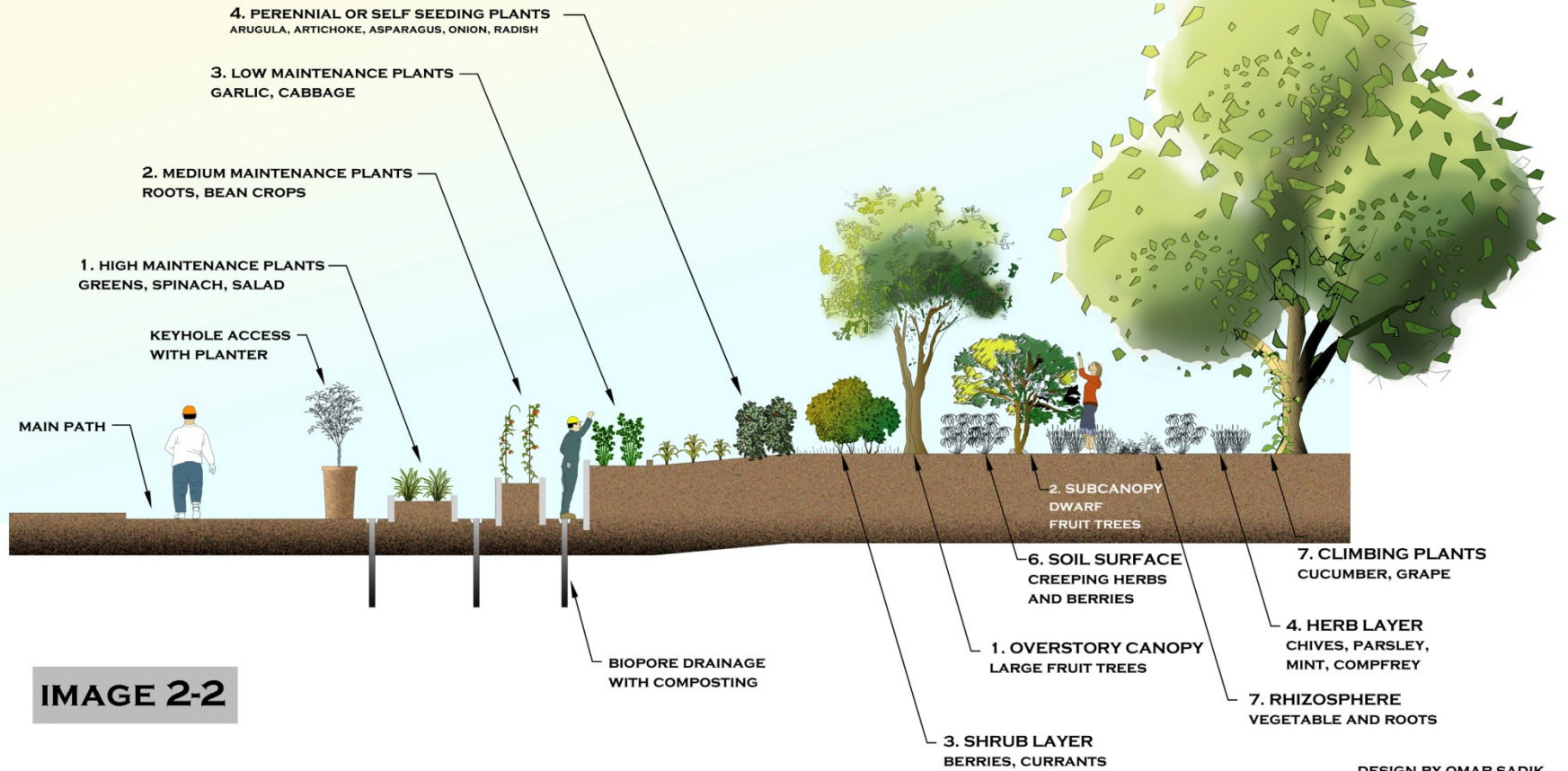


IMAGE 2-2

PUBLIC AREA

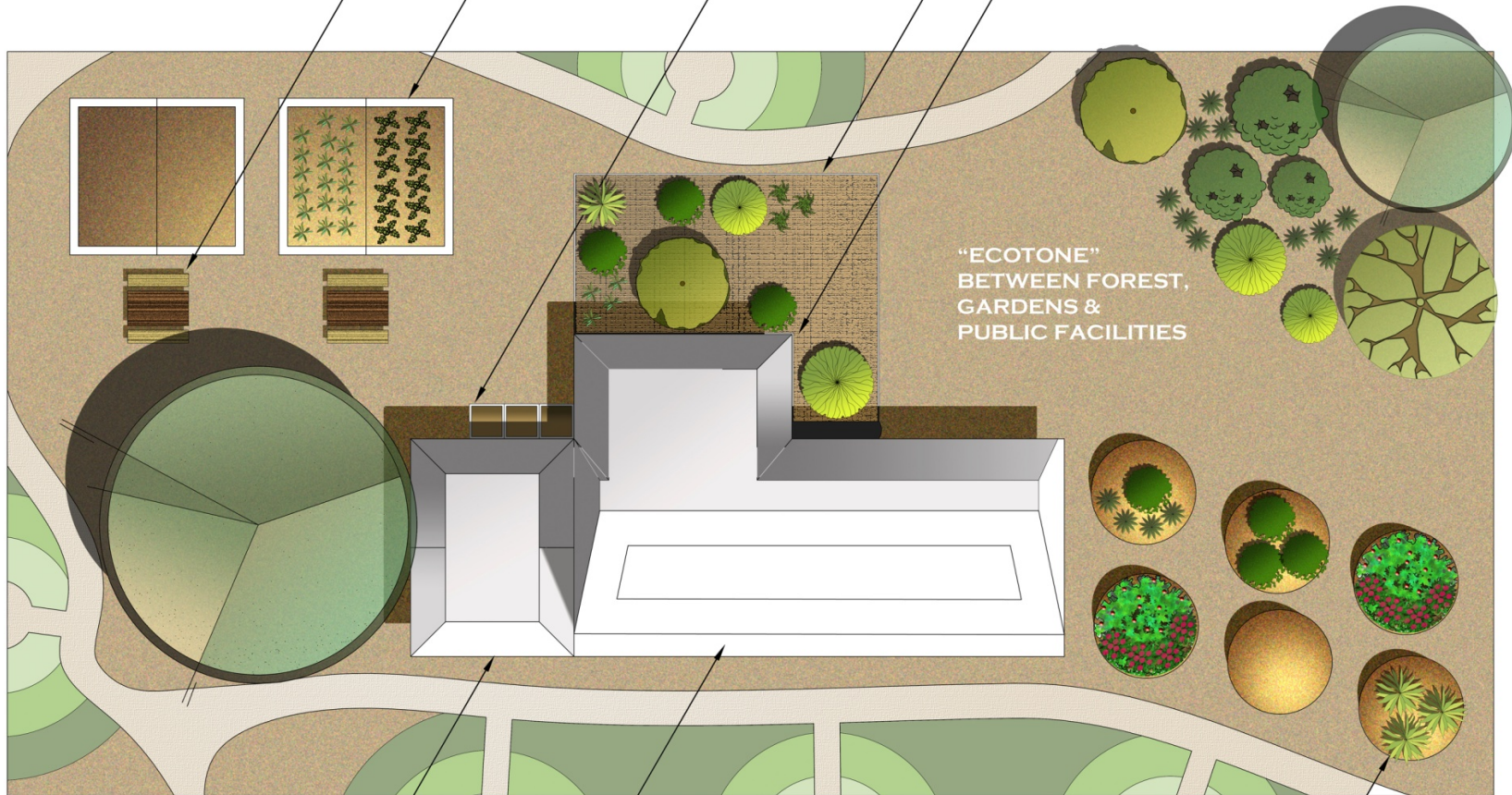
PUBLIC MEETING AREA

CHICKEN RUN

EXPERIMENTAL GARDEN PLOTS

COMPOST BINS (3)

CHICKEN COOP



**"ECOTONE"
BETWEEN FOREST,
GARDENS &
PUBLIC FACILITIES**

**TOOL SHED
& KITCHEN**

MOUND GARDENS

IMAGE 3-1

GREENHOUSE

DESIGN BY OMAR SADIK

LOW IMPACT PERMACULTURE - CONNECTING OUR DOMESTICATED SPECIES

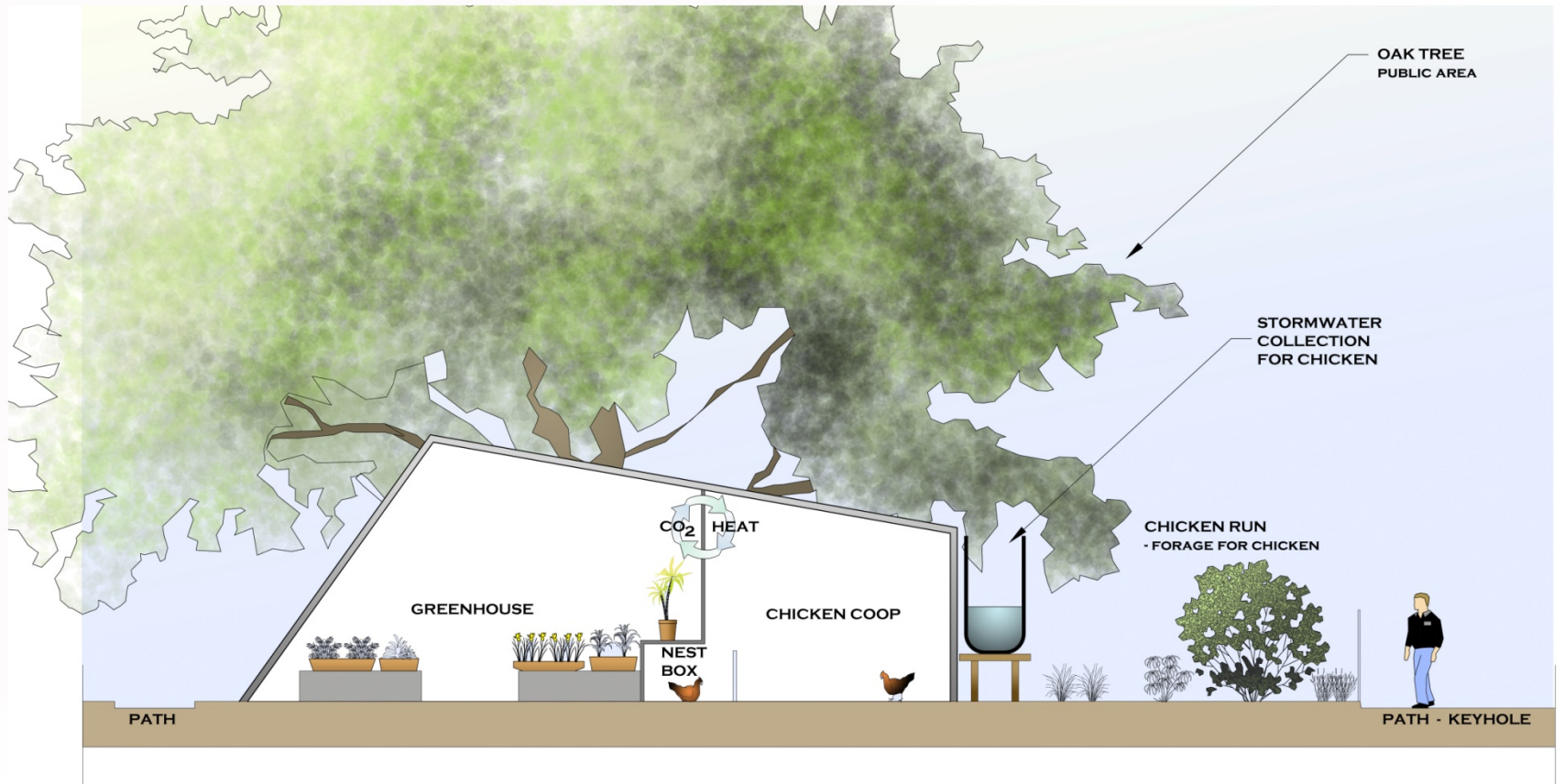


IMAGE 3-2

DESIGN BY OMAR SADIK

LAYERED GARDEN "WALL"

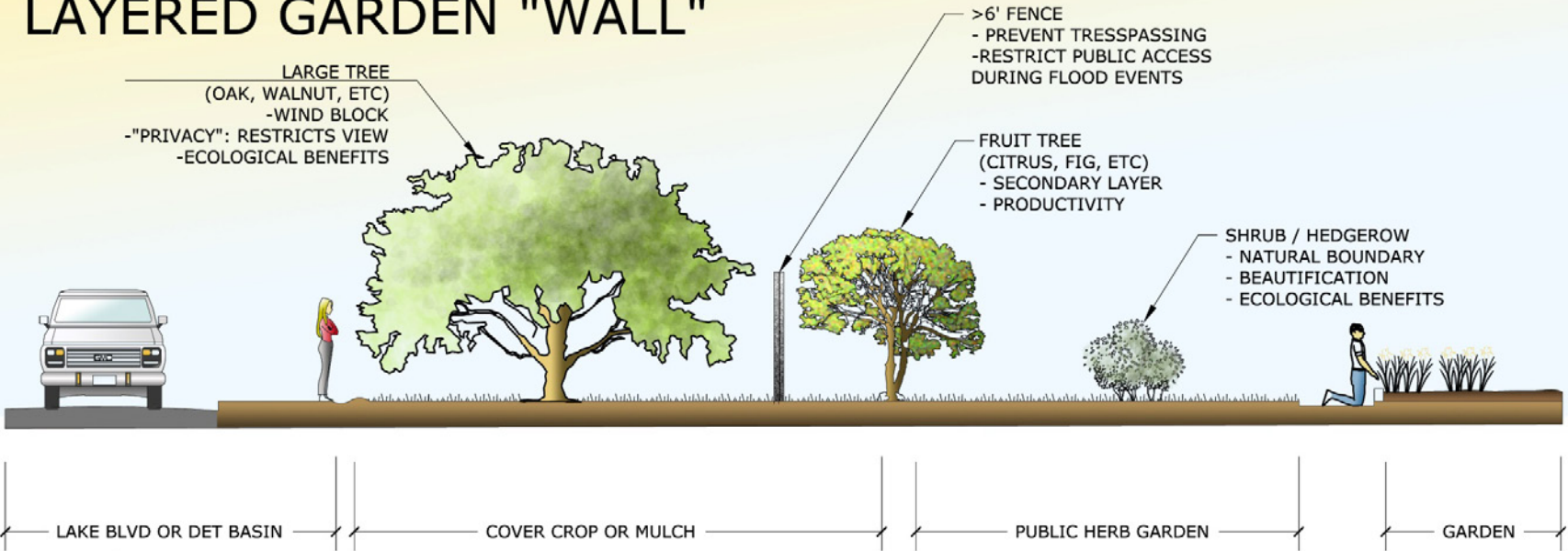
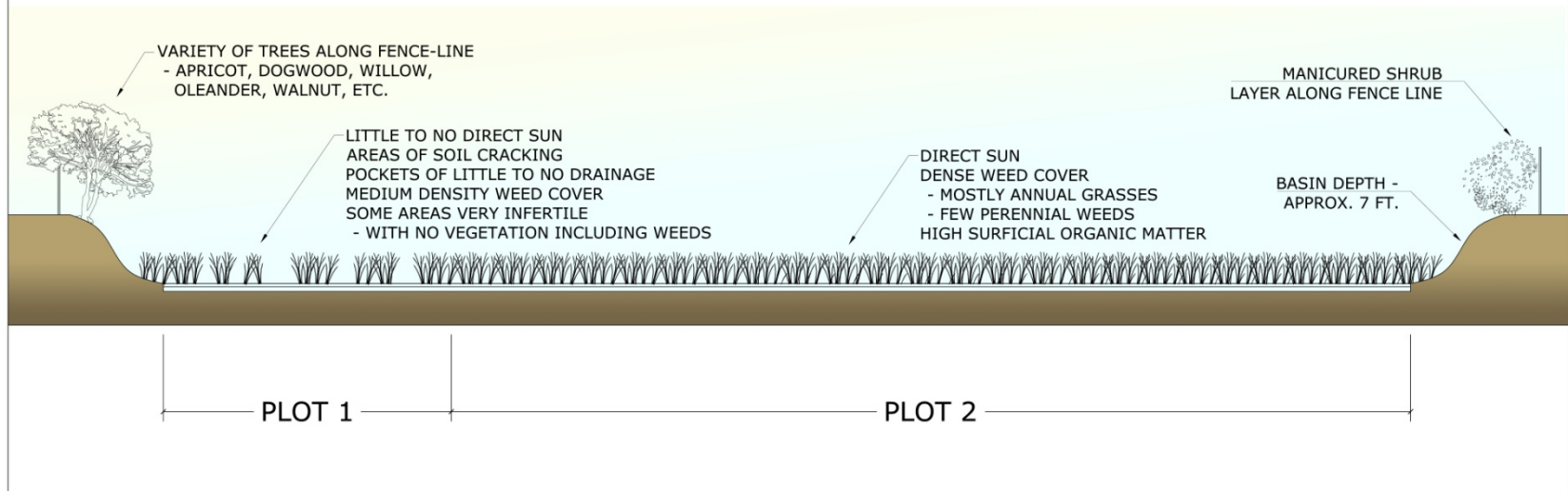


IMAGE 4-1

EXISTING SOIL AND VEGETATION CONDITIONS



PROPOSED SOIL AND VEGETATION CONDITIONS - NTS



IMAGE 5-1

SUMMARY OF THE STONEGATE GARDEN DESIGN ELEMENTS

KEYHOLE GARDEN BEDS – a fresh, efficient and beautiful response to the typical rectangular raised garden bed. The benefits of the keyhole bed is that it maximizes space and minimizes paths. The plants are arranged according to their maintenance requirements, giving the gardener easier access to higher maintenance plants. Keyhole beds also function in sync with each other and create a long continuous bed, which promotes the advantages of cultivating a landscape through the scope of the whole, rather than small fragmented plots.

FOREST GARDEN – is a low maintenance (potentially self maintaining) ecosystem which provides foraging for people as well as productive habitat for the entire ecosystem. A forest garden is healthy for the landscape, as it is a potent processor of nutrients and biotic material. Not only does it beautify the landscape and provide produce, but it provides a sanctuary and a unique sense of place for gardeners.

VEGETATED BIOSWALES – along the North and South edges of the detention basin will help capture toxic urban runoff from the contiguous high density housing. As the site is already graded towards the main detention area to the West, water will flow away from the garden

into the unused portion of the detention basin. Rip rap is encouraged, where possible, to reduce erosion.

THE GREENHOUSE CHICKEN COOP – a permaculture technique which uses the benefits of both domesticated fowl and greenhouse plant cultivation. Although derivatives of the agricultural system, these techniques are new ways to rethink the damaging effects of agriculture.

THE FLOODPLAIN MEADOW – comprises a vast portion of the site. It is a restoration proposition that will help absorb much of the potential flood waters during the flooding regime of the detention basin. Meadow plants, such as grasses, have extensive root systems which increase soil drainage potential and effectively absorb incoming water.

THE LAYERED WALL – is a natural and productive alternative to an opaque fence. The city of Davis requires the detention area to be fenced in for flood protocol and safety. The layered wall consists of three sparsely divided primary layers of vegetation, creating a large depth of space for the gardeners while encouraging passer bys to quench their curiosity of the garden.



The proposed design elements are intended to work together to retain nutrient cycling within the system. This is an important concept when attempting to benefit the whole of the landscape and maintain a long lasting healthy source of food and biological activity. These elements all emanate low maintenance and low impact qualities. With contribution and involvement from the local people, this garden will change the way we interact and connect with our landbase. It will change the way we see ourselves, and others.

IMAGE BY THOMAS MORAN

TRANSCENDENCE

"Modern man likes to pretend that his thinking is wide-awake. But this wide-awake thinking has led us into the mazes of a nightmare in which the torture chambers are endlessly repeated in the mirrors of reason. When we emerge, perhaps we will realize that we have been dreaming with our eyes open, and that the dreams of reason are intolerable. And then, perhaps, we will begin to dream once more with our eyes closed."

- Octavio Paz

We do not inherit the earth from our ancestors, we borrow it from our children.

- Native American Proverb

The connection between man and his environment has been deeply disturbed over the course of contemporary history. A clean and productive natural land base - consisting of pure available water, untainted fertile soil, and fresh seas of air - is the one and only true inherent human right. Every person is entitled to the availability of all the life giving elements in their pure state. This intrinsic right has been lost in our delusional astray in our separation from our landbases and the earth's natural processes. Fueling this irreverent division has been the industrialization and globalization of agriculture. A holistic reverence to the land, something our ancestors regarded as a valuable and holy practice, has been corroded to satiate our machine-like global appetite.

Some (those that profit from the destructive habits of modern agriculture) argue that modern agriculture is vital. That it is the only way to feed the world. That our ancestors were "primitive" and modern agriculture is a pinnacle of progress. These everyday people (CEO of McDonalds, Monsanto, etc) seem to forget the other "great" things modern agriculture contributes to our world -- Socio-economic injustice, habitat destruction, mass species extinction, putrefied food quality, proliferation of toxic materials such as plastics,

emergence of these toxics in every human body including potent toxins in every mothers' breastmilk throughout the world, upsurge of fossil fuel consumption, degradation of soil quality, desertification, deforestation, unstable genetic mutation, loss of genetic diversity in consumed foods leaving potential for destructive diseases, application and subsequent leaching of toxic agricultural chemicals into the landbase and therefore our bodies, excess food production and waste, development of multinational corrupt food production industries (and all conglomerates, for that matter), inhumane animal treatment, obesity, destruction of the world's last remaining indigenous peoples, overpopulation, global addiction to the industrial (agricultural) system, cancer, irresponsible depletion of the world's precious fresh water, the annihilation of the natural world, the annihilation of ourselves.

Yet, a more disturbing and even more important contribution of modern agriculture to the world ultimately defines the motive behind this destructive phenomenon – the loss of coherence between humanity and the natural world. So what does this have to do with a plot of unused land in Davis, California (or anywhere, for that matter)? – Everything. Global issues do not need global solutions. In fact, this approach may ultimately lead to

more issues. Let us start small, but think big. We must think purely, be determined and cultivate the seeds we sow for the whole. We must rethink our way of life. We must move beyond agriculture. We must transcend Civilization.

This is humanity's next shift- to holistically cultivate our terrain and to rise above our futile culture. Overcoming civilization will mean overcoming social hierarchy, unjust suppression, unseen barriers, homogenization of our diverse world and reenvisioning ourselves in our future. Let us not pretend this is an easy goal to accomplish. We must accept the reality that there will be sacrifices in the "luxuries" of the civilized world (of course, these luxuries only benefit the noble minority of our modern world – the middle to upper classes in the 1st world countries). By abolishment, we can take comfort in knowing that these "luxuries" have come at an incredible cost to us and the world.

Rising above civilization is more than participating in, or even accepting, a new garden in West Davis. Local "bottom-up" approaches can only help encourage the potential for a new understanding of our world. Moving beyond civilization will start with apprehension and acknowledgement of our problem. From there, we must envision our future and write our

next chapter. The first page of this chapter, inscribed by 6.8 billion brilliant authors.

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- Edwards, Rebecca. Student, Department of Community and Regional Development. Davis, CA (42)
- Ferrell, Molly. Former Lead Ecologist at Cache Creek Nature Preserve – Woodland, CA.
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- Kramer-Shaffer, Jane. Coordinator of 5th Street Gardens – Davis, CA. (42)
- Lanini, Tom. Professor of Weed Ecology, University of California Davis (56-62)
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- Napawan, Claire. Professor of Landscape Architecture. University of California Davis
- Oki, Lorence. Professor of Environmental Horticulture. University of California Davis
- Six, Johan. Professor of Plant Science and Sustainable Agriculture. University of California Davis