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SUBVERSIA: THE subURBAN SUBVERSIVE

A Thesis Presented to the Graduate School of Clemson University

In Partial Fulfillment of the Requirements for the Degree Master of Architecture

> by Emily Elizabeth Cox December 2007

Accepted by: Douglas A. Hecker, Committee Chair Robert A. Bruhns Frances F. Chamberlain

ABSTRACT

The palimpsest is, by definition, "writing material (as a parchment or tablet) used one or more times after earlier writing has been erased." It provides a conceptual field for the layering of text, or meaning, over time. This text may be built up by successive authors and can be altered by additions and erasures. Traces of these amendments remain, providing a history of revision of the original text. Additions that comment on and interpret the primary text are called *marginalia*.

Landscape operates as a palimpsest, with written, rewritten, erased, and revised layers of history. While typically considered ahistoric, the suburban commercial strip also operates as a palimpsest, one composed more of systems and processes, both natural and artificial, than of historic references. It is the role of the margin to comment upon the main text of the site, to reveal the layers of history, systems, and processes imbedded within it, and to add an additional layer of meaning and function to the existing landscape palimpsest that is absent from the normative condition.

The primary text of the most recent layer of the suburban strip palimpsest consists of a system of roads, parking lots, and buildings- primarily big-box retail. This system is monoprogrammatically consumptive and

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prescriptive, and seeks a homogenous landscape and inhuman scale in order to maximize profitability. This is achieved through cut/fill construction, providinging large expanses of unnaturally flat terrain and massive earthworks of retention. The natural topography and natural systems of the landscape are subsumed and subjugated by this system, often by a thin veneer, ephemeral in both construction and in program. The residual landscape of the margin resides between these elements, and its resultant architecture must, in contrast and as commentary, provide varying scales and typologies of non-prescriptive space that are inherently bound to the imbedded layers of the site.

Movements made in the marginal conditions have resultant reverberations in the main text of the site, and space is created as a direct result of these movements. An architecture of erasure in the margins and redistribution in the primary text will reveal some imbedded layers through void, call attention to others through accretion, and provide spaces for subversive non-consumptive counterprogramming.

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DEDICATION

This thesis is dedicated to my incomparable family: Robert Allen, Susan White, Christian Allen, Lauren White, Sterling Michael, Camille English, and China Grayson Cox. Without your complete devotion, endless patience, and willful blindness to my many shortcomings I could never have completed this thesis, nor would I have ever learned the strength and power of unconditional love. I know that from those to whom much is given, much is expected, and I hope to make you all proud.

ACKNOWLEDGMENTS

This list of people who have been instrumental in shepherding this thesis from inception to completion is far from comprehensive. I feel that I owe a debt of gratitude to each and every person I've interacted with in the past thirty years, but for the sake of brevity, I have been forced to narrow it down to the following:

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Robert Harllee and Willie Mae Cox, for instilling in me the value of education. Grandaddy, thank you for loving me so much that you wanted to steal me away from Mama and Daddy. Nana, I'm deeply sorry that I did not fulfill your greatest wish of my becoming a "skin doctor."

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CHAPTER ONE

THE LANDSCAPE AS PALIMPSEST

Introduction

The landscape operates as a palimpsest, with written, rewritten, erased, and revised layers of culture, ritual, tradition, and contentious history. The physical markings and characteristics of a place as they exist in the present are only a partial rendering of its whole truth. Both natural and artificial landscapes construct the past, present, and future of place. These physical, cultural, and temporal layers accrete and interact, forming an ongoing narrative that links man to landscape and informs architectural intervention. Architectural interventions must be both relevant and sensitive to this condition in order to fully engage the disparate elements of place and to provide a counterpoint to the growing homogeneity of the physical and cultural landscape. The resultant architecture links past and present and sets up a direction or paradigm for future. A rigorous examination into those layers that comprise the text that defines place should reveal strategies to reconnect man to the natural, built, cultural, historical, temporal, and phenomenological landscape through architectural in(ter)vention operating within the concepts of the palimpsest. An open-ended architecture of programmatic indeterminacy must be implemented to acknowledge the past while constructing a new paradigm for the future by incubating the subversive in the marginal roadside, between the main text of road and building.

Market forces encourage globalized homogeneity in the suburban commercial strip and lead to an erasure of distinction of place that creates a palimpsest of subsumed, controlled, and constructed nature. The role of the marginalized roadside condition is to comment upon the main text of the site by hosting a framework for programmatic indeterminacy that allows for the bottom-up counterprogramming of the subversive marginal. The resultant space addresses the lack of truly public space and non-programmatically prescribed activity on the strip and predicts the palimpsest of the future by shifting the dominant paradigm.

Palimpsest Theory and its Relevance

The palimpsest is, by definition, "writing material (as a parchment or tablet) used one or more times after earlier writing has been erased." It is both an object and a field condition: the material is a discrete object, and it provides a conceptual field for the layering of text, or meaning, over time. This text may



be built up by successive authors and can be altered by additions and erasures.

Vestigial remnants of erasures and amendments remain, providing a history of interpretation of the original text. The document's inherent meaning shifts with each intervention, and is never complete- each intervention can be subsequently intervened upon. A non-hierarchical system is created in

which each and every entry into and deletion from the text is equally weighted in constructing the document. Each layer of addition and subtraction is critical to the shifting construction of meaning at any given point in time (Kraft 2000, 5-11).

This is relevant to and critical of the current condition of the suburban built environment, with its focus on wholesale erasure and planned obsolescence

Figure 1.1- Archimedes Palimpsest

(Scully 1999, 46). While it may seem to be a surprising approach to take to the commercial strip, whose entire life as such spans only about forty years, palimpsest theory can begin to question the apparent homogeny of these sites and seek out the covert layering of program and function, both in practical and in conceptual terms. By focusing on the suburban landscape as "not only the land outside the city but also the earth beneath it, as in the ground on which the city is founded or the site that preexists and transcends the program (Marot 1999, 55)" we can start to understand the primacy of the land itself as the originating text and begin to see how subsequent interventions form and are informed by that. This is particularly relevant to Tunnel Road as the proposed site due to the long-term geological processes that formed the existing topography of the site and the recent large-scale interventions into that topography due to development.

Tunnel Road as Palimpsest

Tunnel Road in Asheville, North Carolina operates as a palimpsest developed through years of increasing commodification of the built environment. The chronology of the past forty years of suburban retail development is illustrated by the changing density, scale, and nature of the built environment as one traces the length of the strip from its genesis at the tunnel. The gradient of

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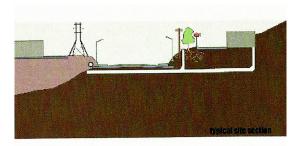
erasure of naturally occurring vegetation and topographic variation in order to accommodate increasingly large-scale retailers and their necessary infrastructure is evidence of the attempt to provide a globalized homogeneity of built environment as a platform for the construction of self through the consumption of goods. This struggle for erasure of the marks of distinction of site results in a built environment that attempts to

Figure 1.2- Aerial View of Tunnel Road

operate independently of the landscape and of the other insertions in the surrounding built fabric. Through market forces, landscape has been reduced to location, and desirability is based on demographics, market research, and proximity rather than its inherent qualities (Kraft 2000, 20).

Infrastructure as Palimpsest

The only elements consistently linking these disparate constructions are those of



the systems of infrastructure that deliver the necessary products, services, and consumers to them. These layers of infrastructure include roads, power, sewage, stormwater

Figure 1.3- Typical Tunnel Road Cross Section

drainage, and telecommunications, among other things, and their sole purpose is to "bring heterogeneous places, people, buildings, and urban elements into dynamic relationships and exchanges which would not otherwise be possible(Graham 2001, 11)."

It is primarily through this matrix of infrastructure that the palimpsestal nature of the sociotechnical processes of Tunnel Road is revealed (Graham 2001,8). All the additions and erasures that concurrently create Tunnel Road in its present manifestation must be filtered through resultant responses in said infrastructure in order to function. This system of infrastructure, with its constant alteration, its non-hierarchical network matrix nature, its fundamental incompleteness, and its role in catalytically staging future insertions can be understood as palimpsest (Wall 1999, 233). The major problem of infrastructural systems in the suburban condition is that due to a lack of density in development, they become distended. The systems become stretched to accommodate sprawling urbanization, but their use is not maximized along their full length. The palimpsest of infrastructure must predict its own future interventions by suggesting a retrofitted pattern of infill development that can maximize its use along existing lines rather than its limitless replication and extension.

Programmatic Proposal

The program proposal seeks to address the current lack of truly public space and nonprogrammatically prescribed activity on the strip by providing in the marginalized condition between road and building a true public space of programmatic indeterminacy: a framework that allows the opportunity for a subversive grassroots counterpoint to the globalized homogeny that currently defines the programming of the strip.

Berm System as Site

Additions to a palimpsest that transform or comment on its meaning at any one moment in time are referred to as marginalia. This refers to their common placement in the margins of a page. They typically add another interpretation,

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or layer of meaning, increasing the multivalency of the whole (Kraft 2000, 12-15). As defined by the Oxford English Dictionary, the act of being marginal can consist of actually existing in the margins of a page. It can also"pertain to an edge, border, or boundary, situated at the extreme edge (of an area, mass, etc.)" Finally, it can exist "close to the limit, below or beyond which something ceases to be possible or desirable (Oxford English Dictionary, vol. 1,1971)."



Figure 1.4- Typical Landscaped Berm

The appropriate site for intervention into the palimpsest of Tunnel Road is the marginal condition of the landscaped berm system. This system can be found flanking the

roadscape, dispersed throughout the impervious surfaces of the parking lots, and surrounding the buildings. Existing in the outlying margins of plat development, many of these are swathes that are not capable of being developed due to an inefficient use of land. In many cases, the berm system serves as a vestigial reminder of the natural terrain that was significantly altered by the deletion of existing topography and vegetation. In other cases, it is a completely artificial construction intended to serve as a landscape pastiche, a screening and placating device. In all cases, it operates in the margins between roadbed, natural landscape and construction and provides a convenient foil for development. Since it is rarely occupied, it can covertly accommodate the unsightly elements of infrastructure such as stormwater drains, manhole covers, electrical boxes, artificial lighting, and the like. It need not necessarily conform to a pre-determined footprint, and therefore is flexible and elastic in mediating between the road and the built construct.

Scrutiny of these overlooked and underutilized swathes reveals a plethora of simultaneous infrastructural programs that are hosted there and that provide telling commentary on the overall text of the site. A further layering of programming may prove advantageous to explicate the distinctions of the site, to provide missing programmatic elements in the site, and to make more efficient use of overlooked and marginalized land in the site. I propose a reconception of the berm system as a "terrestrial infrastructure" layered with active programming (Easterling 1997, 23). This presents opportunities to work towards a development pattern of sufficient programmatic density to maximize use of existing infrastructure while intervening in the berm system to reveal hidden natural, constructed, and programmatic layers of the site. Architectural intervention should provide for density and differentiation of use, as opposed to density of building.

Proposed Programmatic Intervention

The program proposal seeks to address the current lack of truly public space and nonprogrammatically prescribed activity on the strip by creating true public space that is programmatically indeterminate. Within the berm system of Tunnel Road, the programmatic insertions of indeterminacy will operate on a micro and macro scale with three layers of strategy active layering, erasure/exposure, and catalytic commentary. These insertions will tap into the underutilized infrastructural system to maximize density and differentiation of use by providing a dispersed layer of small-scale infrastructure interventions that blanket the berms and the interstitial paved parking areas in changing gradients, patterns, and scales that relate to past, present, and predicted future patterns of use.

These access points will host an ever-shifting array of marginal programming that provides the opportunity for a grassroots counterpoint to the globalized homogeny that currently defines the programming of the strip. This active layering will provide a catalytic commentary to the main text of the site, and the marginal condition will effect change on the main condition over time as the palimpsest predicts the future by shifting dominant paradigms through the incubation of the subversive marginal. The choreography of construction and deconstruction that creates these interventions will provide a catalytic brand of performance art that engages and enlightens the unsuspecting consumer.

CHAPTER TWO

LAYERS OF LANDSCAPE

History and Development of Commercial Strip

"Everything is good as it comes from the Author of Nature; but everything degenerates in the hands of man... He mingles and confounds the climate, the elements, the seasons... he will have nothing as Nature made it...(Rousseau 2003, 1)."

Since the dawn of humankind, the landscape has been commodified. Far from the idealized notion of a heartwarming give-and-take relationship with the land, ancient man used the earth for his own devices, to further his security and social standing much as contemporary society does now. Recent archeological discoveries demonstrate a frequent connection between the abuse of land with the fall of ancient civilizations, proving that "early man strongly influenced his environment, often for the worse. (Brown, 1987)."

"'By nature, present day man is neither more nor less destructive of the land than was his forebears... It's just that the technology of destruction is vastly more efficient than it was in the past. There never was such a thing as a noble savage (Brown, 1987).' "

As early as the first group settlements in the Mesopotamian valley, man has been engaged in retail trade on the commodities he could wrest from the earth. Maximizing the performance of crops ensured that not only would he have sufficient food to meet his needs, but that he would also have extra to barter and trade with for items that he did not produce himself. Historically, most Western societies held the pursuit of trade in low esteem through the Industrial Revolution, frowning upon the sinful nature of the pursuit of profit.

Early shopping had little impact on the landscape, unlike the production of the goods available for purchase. Open-air markets and bazaars along trading routes were the hubs of commerce and lived lightly on the landscape. The Greek agora, for example, was nothing more than a large open space with good drainage in close proximity to major public buildings. Its position near the heart of the city made it easy to "mixed trade, civic activities, and socializing, making it the central place for exchanging not just food and wares, but ideas." While disparaged as "a degrading endeavor, to be separated

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from the world of ideas," in ancient Greece, the democratic nature of the agora ensured that the pursuit of both happened alongside each other, positioning consumption shoulder to shoulder with pursuits of the highest social order (Satterthwaite 2001, 10-14).

Early shops, such as those uncovered in Pompeii, demonstrate an economy of means in distributing goods and services that would be maintained as a standard up through the Industrial Revolution. Structures served as commercial enterprises with open storefronts on the first floor street side that could be closed up during off hours and workshop space behind. The more private spaces farther from the road and the second story spaces served as living quarters. (Rostovtzeff 1926, 72).

Ostia, a critical port for Rome, had a significant development in market economy and commercial development- the appearance of the first modern shopping center. The House of Lararium was "refined under Hadrian... with two passageways from two streets and ten shops." This architectural linkage of similar functions quickly accelerated and shortly thereafter the six-story 170room Trajan Market was constructed in the heart of Rome on Quirinal Hill. This set a precedent that is still largely in effect today. The development of shops as opposed to the previous dependence on open-air transitory markets established commerce as a force of change in the landscape (Satterthwaite 2001, 15-17, 21).

These "permanently concentrated shops" grew through the end of the sixteenth century, when new wealth distributed among the nobility and the breakdown of sumptuary laws "led to social competition among the nobility, and to a new recreation, shopping (Satterthwaite 2001, 21-23)." This move toward conspicuous consumption joined forces with technology in the late eighteenth and early nineteenth centuries, when the advent of the Industrial Revolution allowed production of goods to explode. This new surplus of production required an equal rise in consumption. The answer was, in part, to position goods as fashionable statements that would rise and fall in popularity, to be replaced for the purposes of making a new statement about oneself rather than using a good until the end of its lifespan. This introduction of planned obsolescence to the marketplace ensured repeat business and fed the economic machine.

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The rising expectations of society for non-necessities and the increasing "democratization of luxury (Twitchell 2002, 29)" rendered shopping a more frequent pastime, and trade finally shook off the disreputable reputation it had historically been encumbered with. The casual concentration of similar shops in the seventeenth century gave rise to increasingly elaborate connections of shopping boulevards and elegant arcades in major European cities. These destinations provided more than just goods and services- they provided social and entertainment opportunities. This was further built upon in the late nineteenth century, with the development of the department store. "Browsing was encouraged in these new commercial emporia, with artistically displayed merchandise, lunch rooms for tea and meals, and even luxurious rest rooms for lounging. This was a world of fantasy and escape where shoppers could spend the day. It was like the theater. And all that style and gentility lent some class- and much needed respectability- to shopping, erasing some of the lingering image of disreputable bartering and 'trade' (Satterthwaite 2001, 29.)"

This pattern of larger offerings, entertainment values, and clear pricing trickled down to benefit the less fortunate, also. Those who could not afford to indulge

in luxuries at department stores could instead find solid bargains at set, rather than bartered, prices in well-controlled environments at new chain dimestores. The convenience of being able to purchase many different types of goods in one place appealed to the growing populations of wage-earners, who were beholden to bosses and supervisors for their less flexible schedules.

This mentality of convenience consumption would reach its pinnacle in suburban America. In the early twentieth century, the advent of the automobile combined with a booming post-war economy and the end of the deprivations of the Depression to create a perfect storm of suburban expansion. As Americans abandoned inner cities for pastoral patches of land with complete single-family homes, large chain stores frequently preceded development, reversing the age-old progression of housing begetting shopping. Regional shopping centers, often accessible solely by car, with priority given to parking and automotive access, began to crop up. The design of these centers is still a familiar formula today. Positioned for utmost convenience to the commuter, the typical strip had rows of connected shops in a large, low-slung subdivided building with plate-glass display windows and signage facing the street. Most critically, it was surrounded by a large expanse of parking and was fed by easy entrances and exits to a main highway artery. This development was quickly superceded in the 1960's by the most "convenient" destination shopping yet: the mall. In this shopping paradigm, the display windows that initially served to entice motorists off the road turned in to face each other. Enclosed, centrally managed, and surrounded by a sea of convenient parking, they were prominently placed in proximity to the new major highway intersections constructed by the federal highway program.

Malls have continued to grow ever larger, and expanded big-box "category killers" such as Home Depot and Toys R Us have grown up in proximate areas, creating zones of convenience and economies of scale for customers. Located "near major highways but away from traditional community centers," these take advantage of exurban areas where "land is available, cheap, and unzoned (Satterthwaite 2001, 106-107). These suburban commercial strips are a familiar landscape that provides the majority of Americans their main environment for consumption.

Tunnel Road as Commercial Strip

The development of Tunnel Road as commercial strip closely parallels the

development pattern of retail history overall. Separated from Asheville proper by Beaucatcher Mountain, it is connected and birthed by the tunnel for which it is named. In classic suburban sprawl style, the majority of structures exist in chronological order and proximity to the tunnel, with the oldest structures typically the smallest and the newer, larger footprints progressing outwards. Inexpensive land and an increase in willingness to take on expansive siteworks to ensure the homogeneous nature of chain stores encourage new structures to be built rather than infilling empty smaller lots or reusing existing structures. An analysis of historic aerial images and topographic maps from the past fifty

years reveals the increasing progression of intervention to the natural landscape as the development of the suburban commercial strip has grown along Tunnel Road. Figures 2.5-2.8 demonstrate the increasingly invasive footprint of development as time passes.

Due to the extreme topography of Tunnel Road based on its proximity to Beaucatcher Mountain and the entrance to the Blue Ridge Parkway, increasingly large-scale siteworks have had to be implemented to create the flat surfaces demanded for big-box large scale retail islands and the sea of parking that must surround them (Figure 2.9.)

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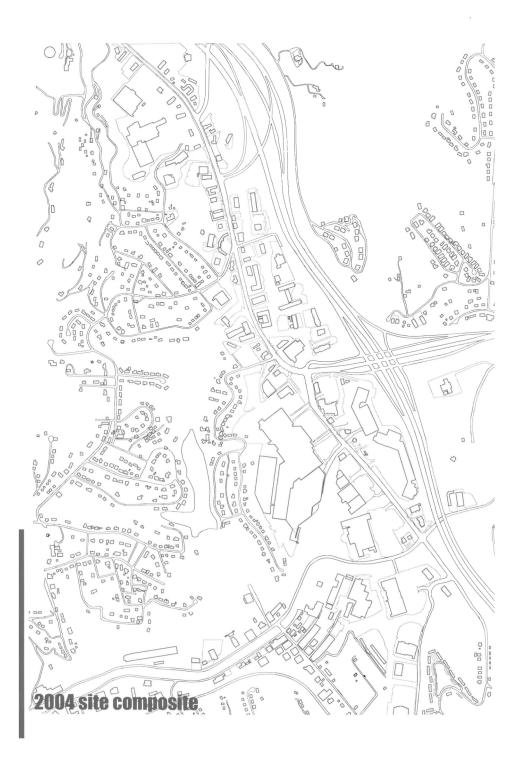


Figure 2.1- 2004 Site Composite.



Figure 2.2-1975 Existing Development



1985 existing development

Figure 2.3- 1985 Existing Development



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1995 existing development

Figure 2.4-1995 Existing Development

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Figure 2.5- 2004 Building Footprints



Figure 2.6- 2004 Paved Parking



berm system

Figure 2.7- Berm System



berm categorization and temporal mapping route

Figure 2.8- Berm Categorization and Temporal Mapping Route

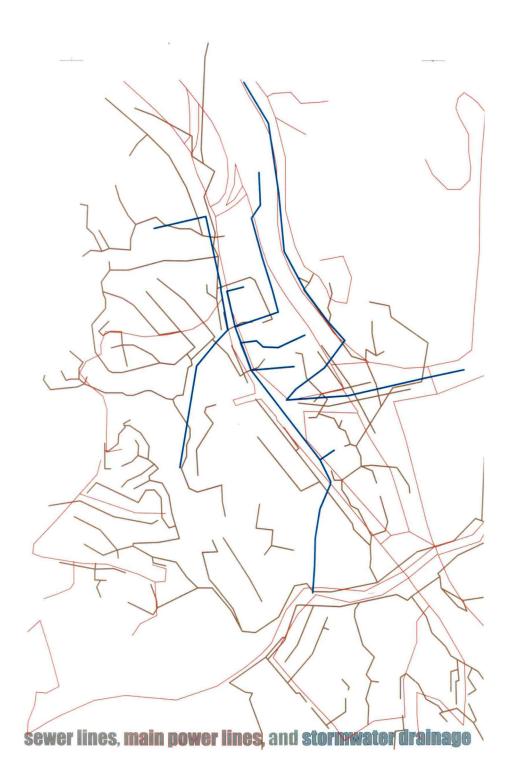


Figure 2.9- Sewer Lines, Main Power Lines, and Stormwater Drainage

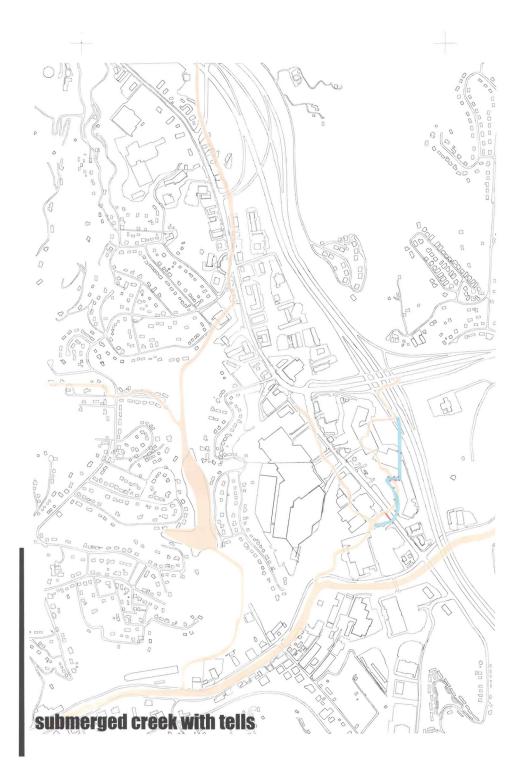


Figure 2.10: Submerged Creek with Tells

subUrban Geology of Tunnel Road

Tunnel Road exists as a thin veneer applied over and cut into the land itself. The road both forms and is informed by the topographical reality of the suburban condition. The primacy of the land that lies beneath the man-made veneer exerts itself on a multiplicity of levels. The power and supremacy of the land in this particular area is due to the geologic processes of over one thousand million years. Beaucatcher Mountain is part of the Blue Ridge, a section of the Appalachian Mountains. These were formed when "a continent made of parts of present-day South America and Africa hit the Carolinas (Roberson and Stewart, 19). Initially reaching heights greater than twenty thousand feet, over millennia precipitation has eroded the Blue Ridge down to its current softly rolling heights, with Mount Mitchell being the highest peak at 6,684 feet.

Beaucatcher Mountain should bear significant geological resemblances to Mount Mitchell, as it would have been formed through similar geological processes. A thin layer of topsoil and clay provides cover for "a coarsegrained metamorphic rock... called gneiss (Roberson and Stewart, 72)." This variety of gneiss is called Henderson gneiss, and it was named for Henderson County, North Carolina, where it is very common. It is actually a type of granite made up of minerals including mica, feldspar, and quartz. Layers of amphibolite and schist break over this granite in thrust faults, creating upward motion of earth. Other minerals that may be included in the layer formation of the Tunnel Mountain terrain are kyanite and quartzite.

These underlying layers form the base text of the palimpsest of Tunnel Road. The subsequent interventions of development have sought to subvert and homogenize the dominant forces of the natural landscape.

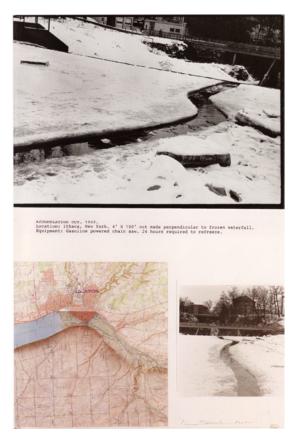
CHAPTER THREE

INTERVENING IN THE LANDSCAPE

Precedents for Intervention

The following precedents are examples of Land and Environmental Art that use the principles of Accretion, Erasure, Catalytic Commentary, and Revelation/ Release to delineate the relationship between man and nature through intervention. They "manipulate the landscape as a material in its own right. The artists add, remove, or displace local natural materials... to [draw] out the relationship between the existing characteristics of a site and evidence of human intervention (Kastner 1998, 45)."

Doris Bloom and William Kentridge's Heart was a chalk drawing on the landscape. Implemented at such a scale that it was impossible to perceive its pattern from ground level, it drew attention to the reality of its canvas, the land, through inviting speculation about its content. When viewed from above, it provided a critical commentary on the circulation system of nature versus the intervening circulation systems of man (Kastner 1998, 71).



Dennis Oppenheim's Accumulation Cut consisted of a channel cut into ice and snow perpendicular to a stream and a waterfall that had frozen solid. The exposed water quickly refroze, and subsequent snows covered the intervention, highlighting the futility of man's struggle with nature (Kastner 1998, 49).

Figure 3.1: *Accumulation Cut* by Dennis Oppenheimer

Glue Pour by Robert Smithson is an example of commenting on the

landscape through accretion. As the poured glue slid down the landscape, it dislodged some soil while solidifying other areas. This application of a homogeneous binding material allowed the topography of the hill to be read and understood in a new way (Kastner 1998, 96-97). In a similar vein, his *Partially Buried Woodshed* recontextualized a small vernacular structure through a process of accretion. By piling earth onto the building until the point



Figure 3.2- *Glue Pour* by Robert Smithson



Figure 3.3- Las Vegas Piece by Walter de Maria

of structural failure and then allowing the forces of nature to work on it, Smithson invited a dialogue between acts of man and acts of nature (Kastner 1998, 99).

In Walter de Maria's Las Vegas Piece, a system of four trenches was dug into the earth, framing the natural curvature of stream systems. This juxtaposition of the natural and the man-made exaggerates the inherent qualities of each. The imposition of the unnatural marking of the landscape defined and activated it, and the

orientation and scale of the cuts commented on the artificiality of map-making (Kastner 1998, 46). The Desert Cross, two intersecting chalk lines in the desert, brought the temporality of nature into focus, both by drawing attention to the point of intersection as a specific place in time and by disappearing through entropy.



Figure 3.4- *Spiral Jetty* by Robert Smithson

In Robert Smithson's Spiral Jetty, materials were excavated from the beach and dispersed in a spiral pattern out into the water. The pattern of the dispersal was intimately related to the site, and commented on its surroundings. The removal of material revealed the layering of sediment that formed the beach. As time passed and the jetty deteriorated, those materials were redistributed to the beach. In the meantime, the spiral jetty activated and extended the margin between land and water. As water levels rose and fell, it was submerged and then re-emerged. This served as a marker with which to measure the passage of time and the state of nature (Kastner 1998, 58-59).

Secant by Carl Andre was a line of one hundred heavy timbers placed in the landscape. "The line of the work articulated the rise and fall of the land and introduced a different scale into the natural setting (Kastner 1998, 74)." The introduction of this element activated a formerly banal landscape and highlighted the nature of its terrain.



Figure 3.5- Double Negative by Michael Heizer

Michael Heizer's Double Negative was created by the removal of 240,000 tons of earth from either side of a natural valley. The form of this removal suggested a continuous gash interrupted by the valley, creating something out of nothing- sculpture out of void. This is an example of active erasure (Kastner 1998, 54-55).

Dennis Oppenheim's Gallery Transplant was a drawing of an actual gallery floor plan transposed to a rural setting. The drawing was done with the removal of snow and the revelation of the ground beneath. By making the



Figure 3.6: Gallery Transplant by Dennis Oppenheimer

land "a surface for inscription," Oppenheimer manipulated the relationship between context and content, resulting in a redefinition of both. His work with site inscription was taken further with Relocated Burial Ground, an enormous cross etched into the landscape with asphalt primer. The land also bears the markings of the heavy machinery used to make it. Over time, all these manmade interventions were subject to

entropy and were subsumed into the landscape and erased (Kastner 1998, 75).

Michael Heizer's Dissipate similarly dealt with erasure and negation. By burying wood timbers into a dried lakebed, he set a natural process of reclamation into motion. As the timbers deteriorated, their voids remained.



This process of entropy mapped the creation of nothing from something, and commented on the march of time (Kastner 1998, 91).

Alan Sonfist's Time Landscape [™] is an environmental sculpture that reclaims an urban infill lot and attempts to return it to its ecological state prior to the colonization of America

Figure 3.7: *Dissipate* by Michael Heizer

through a process of accretion. The inherent irony of this "nature" being completely constructed is tempered by Sonfist's position that replanting indigenous forests is necessary to preserve a portion of ecological heritage. Similarly, his Pool of Virgin Earth, which grew out of the random seeds that blew across it and germinated, suggests a post-industrial return to the land's previous state without human intervention (Kastner 1998, 150-152).

Methods of Inscription

The interventions planned for the palimpsest of Tunnel Road are to be implemented with the tools of construction. The processes of erasure, exposure, subtraction, and accretion are all to be inscribed on the surface of the land with the heavy earthmoving equipment of traditional building. The style of marking that each makes on the landscape is as singular as the stroke of individual paintbrushes. Each stage of the construction choreography is carefully matched with the appropriate implement of execution (Figure 3.8). The effect of the void created by the movement of mass and the resultant accumulation of mass was studied in a series of controlled experiments with the material of intervention: earth (Figure 3.9). The results of the construction choreography are inscribed in a series of CAD/CAM models that document the composite choreography of interventions to the Tunnel Road site. Due to the subtle nature of their inscriptions, an enlarged portion of one model is pictured rather than showing them in their entirety (Figure 3.10).

Material Palette

The interventions planned for the palimpsest of Tunnel Road are to be executed with the materials native to the site. The processes of erasure, exposure,

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subtraction, and accretion are to be carried out on the typical components of the commercial suburban strip. These materials will be recontextualized through their atypical juxtapositions and dispersal (Figure 3.11).

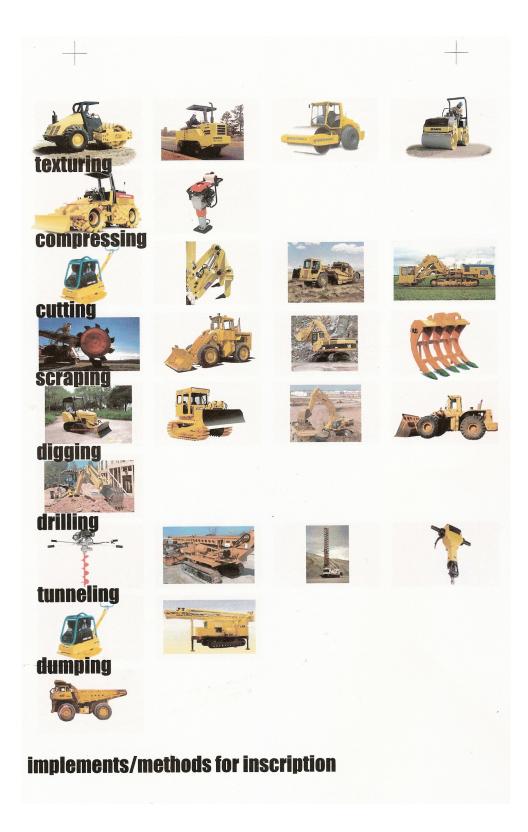


Figure 3:8- Implements/Methods for Inscription

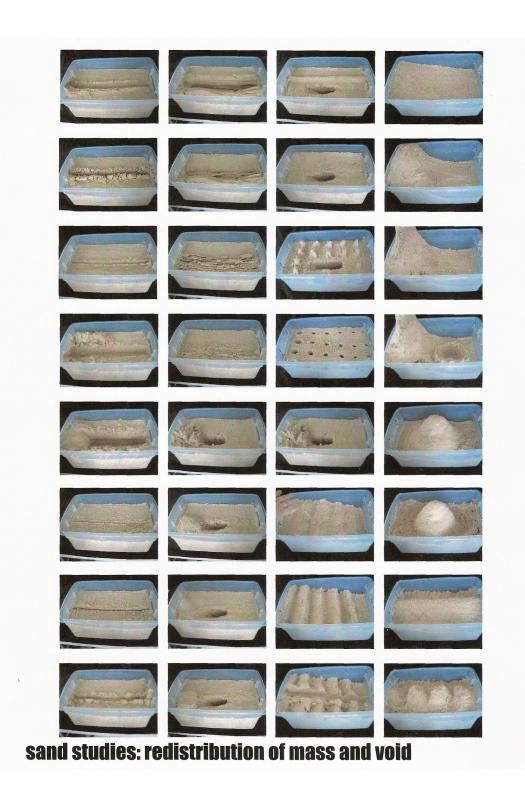


Figure 3.9- Sand Studies: Redistribution of Mass and Void



Figure 3.10- CAD/CAM Model of Composite Choreography of Construction

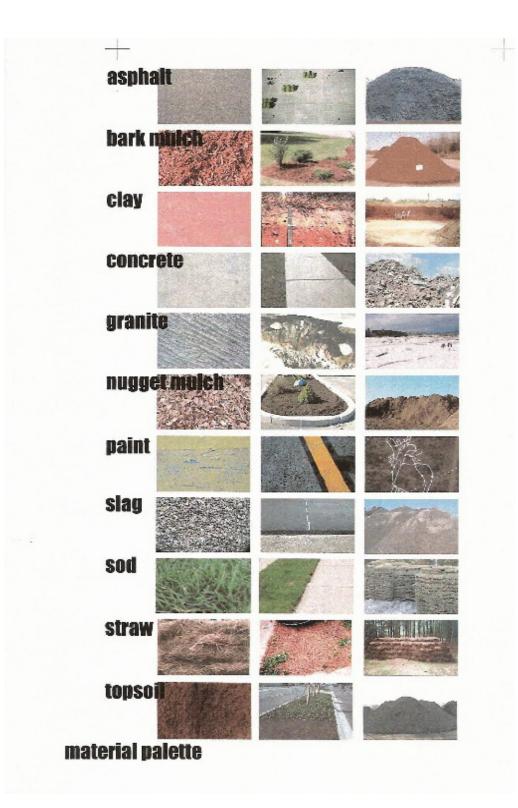


Figure 3.11- Material Palette

CHAPTER FOUR

CHOREOGRAPHY OF CONSTRUCTION

Constructed Nature

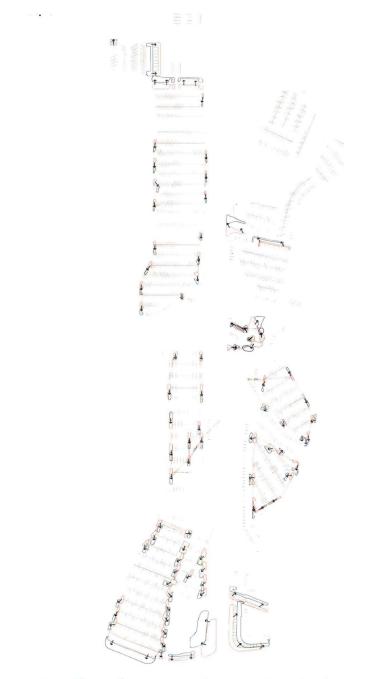
By removing and redistributing the constructed nature of the marginal berm system in such a way as to both demonstrate its artificial nature and its ineffectiveness as a substitute for nature, a catalytic commentary is made that recontextualizes the relationship between pedestrian and constructed environment, and a more ecologically sustainable integration of nature and construction is achieved.

The intervention into the system consists of removing the contents of the raised parking lot planters to create sunken basins. These are connected up throughout the parking lot by troughs created by the removal of strips of paving material. This serves to allow runoff stormwater to travel into the depressions, creating microswales. The troughs also serve as reverse speedbumps, affecting the vehicular experience of the site. The materials removed from the islands are amassed in direct proximity to the islands they were removed from and are formed into an identical footprint. Excess excavated material is gathered to form a "continent," as opposed to an island, directly in the flow of foot traffic. This continent is low but large, and is covered with repositioned turf and ornamental vegetation reclaimed from the deconstructed islands. This is grouped in such a way as to form a "forest" of the typical small-scale ornamental trees and plantings such islands normally support, confronting the consumer with the obstacle of artificial nature (Figures 4.1-4.5.)



construction choreography: constructed nature existing

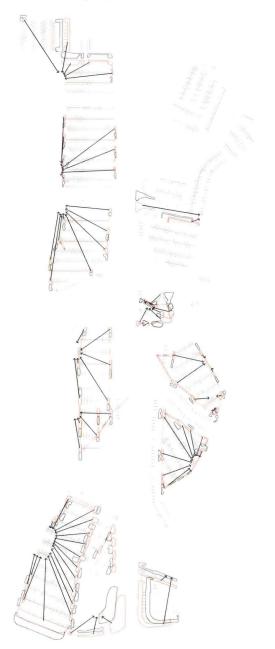
Figure 4.1- Construction Choreography: Constructed Nature Existing



construction choreography: constructed nature stage 1

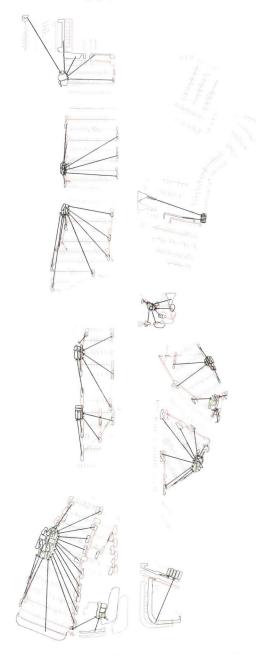
Figure 4.2- Construction Choreography: Constructed Nature Stage 1

- E - 4



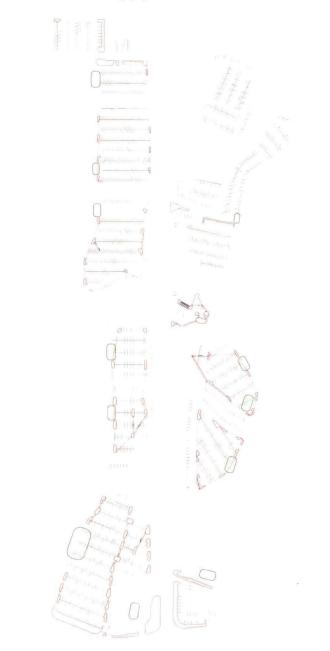
construction choreography: constructed nature stage 2

Figure 4.3- Construction Choreography: Constructed Nature Stage 2



construction choreography: constructed nature stage 3

Figure 4.4- Construction Choreography: Constructed Nature Stage 3



construction choreography: constructed nature stage 4

Figure 4.5- Construction Choreography: Constructed Nature Stage 4

The following steps detail the construction choreography of the intervention to

the system of constructed nature (Figures 4.6 and 4.7):

- Step 1: trenching existing ornamental plantings for repositioning.
- Step 2: scoring turf for removal.
- Step 3: rolling turf for removal.
- Step 4: loading turf for redistribution.
- Step 5: removing existing ornamental plantings for repositioning.
- Step 6: cutting and removing existing curb.
- Step 7a: excavating raised island to create depression for microbasin.
- Step 7b: removing and reclaiming asphalt for continent construction.
- Step 8a: planting microbasin with appropriate trees to maximize shade and positive ecological effect.
- Step 8b: removing asphalt to create bioswale/speed subtraction.
- Step 9a: mulching new trees to improve water conservation and contaminate absorption.
- Step 9b: leveling and compacting soil for bioswale and speed subtraction.
- Step 10a: planting secondary and tertiary vegetation to promote phytoremediation of underlying contamination, decrease erosion and stormwater runoff, and provide mini-habitats for birds, insects, and small mammals.
- Step 10b: laying reclaimed concrete curb rubble as pavers for bioswale speed subtraction.
- Step 10c: repositioning existing vegetation in tight formation and unrolling existing sod.
- Step 11a: infilling bioswale between pavers with phytoremediary vegetation in areas of low traffic and contaminateabsorbing mulch in areas of high traffic.
- Step 11b: allowing nature to take its course on existing vegetation and confront consumer with the obstacle of artificial nature.

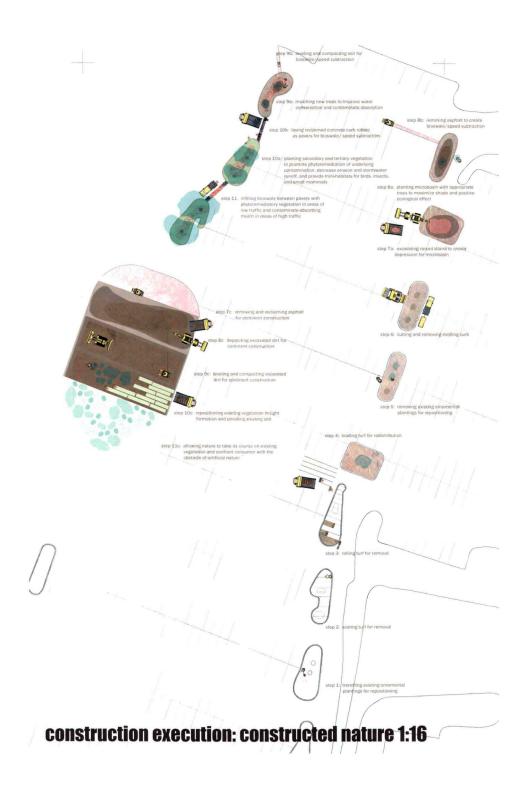


Figure 4.6- Construction Execution: Constructed Nature 1:16

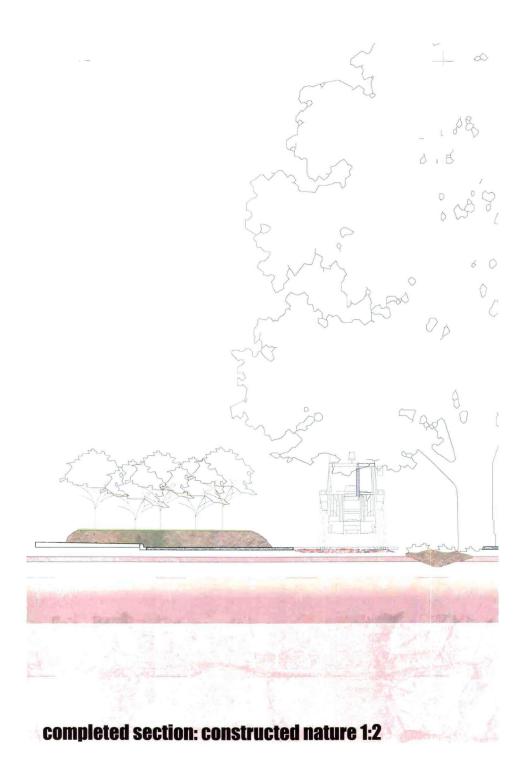


Figure 4.7- Completed Section: Constructed Nature 1:2

<u>Subsumed Water</u>

By excavating the roadbed and exposing the subsumed creek that lies beneath it, the revelation and release of controlled nature is achieved, revealing the subterfuge of the main text of the commercial strip site. This in turn reconnects the consumer/commuter with the substance of the natural world as it serves as a substrate for the constructed world. This exposure reveals the thin veneer of the constructed world as it is peeled back and its disproportionate power as its systems of subjugation are revealed and subverted by the release of the captive water.

The intervention into this particular system consists of excavating the subsumed creek that was contained and diverted below the roadbed. This excavation is terraced and scaled for pedestrian traffic, providing a linkage between either side of the commercial strip below the vehicular traffic. The excavation is bridged by transparent metalwork, allowing a visual connection for motorists with the water and earth below. The exposed earth serves as engineering materials in various capacities to support the intervention, and this intervention supports the remediation of groundwater and runoff through providing additional unpaved surface area for percolation, among other things.

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Plantings of native grasses contribute to the phytoremediation of groundwater

and runoff (Figures 4.8-4.11.)



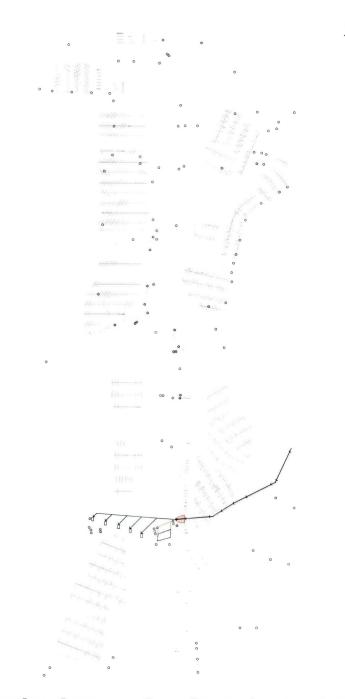
construction choreography: subsumed water existing

Figure 4.8- Construction Choreography: Subsumed Water Existing



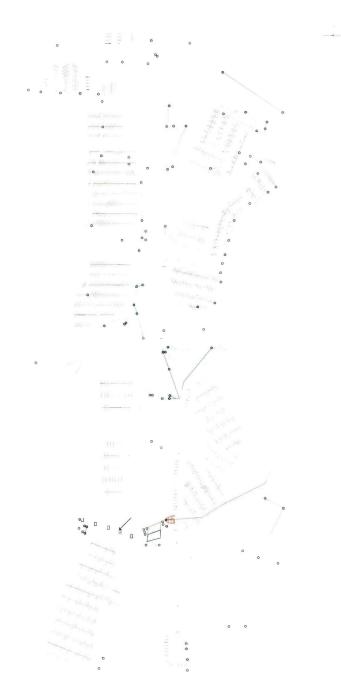
construction choreography: subsumed water stage 1

Figure 4.9- Construction Choreography: Subsumed Water Stage 1



construction choreography: subsumed water stage 2

Figure 4.10- Construction Choreography: Subsumed Water Stage 2



construction choreography: subsumed water stage 3

Figure 4.11- Construction Choreography: Subsumed Water Stage 3

The following steps detail the construction choreography of the intervention to

the system of subsumed water (Figures 4.12 and 4.13):

- Step 1a: removing asphalt along pipe path.
- Step 1b: cutting concrete gutter for removal.
- Step 2a: digging out trench to expose pipe.
- Step 2b: removing concrete gutter slabs for use in geotextile bridge footing.
- Step 3a: laying sedum mat and planting native grasses in exposed pipe path.
- Step 3b: removing slag layer for use in geotextile bridge footing.
- Step 4a: excavating steep embankment to reveal subsumed water system.
- Step 4b: tilling compressed substrate.
- Step 5a: removing asphalt and substrate to excavate roadbed.
- Step 5b: filling and leveling gutter.
- Step 6a: rough leveling, terracing, and compacting of soil.
- Step 6b: laying sedum mat and planting native grasses in gutter path.
- Step 7a: precision leveling, terracing, and compacting of soil.
- Step 7b: allowing native grasses to aid in infiltration and cleansing of runoff.
- Step 8a: laying sedum mat and planting phytoremediatory vegetation.
- Step 8b: retrofitting existing storm drains with sediment traps.
- Step 9: installing modular framework for rammed earth retention tiers and tamping sections.
- Step 10: augering earth for geotextile bridge footing.
- Step 11: inserting geotextile tube for bridge footing.
- Step 12: filling geotextile tube with site rubble and excavated earth.
- Step 13: capping geotextile tube and connecting steel girder.
- Step 14: laying open deck steel gridding and installing perforated metal guardrailing and trash collection gutters.
- Step 15: applying RP Plus deionization process.
- Step 16: grading and leveling constructed slope.

- Step 17: compacting soil of constructed slope.
- Step 18: applying final deionizing sealant to compacted soil of constructed slope.

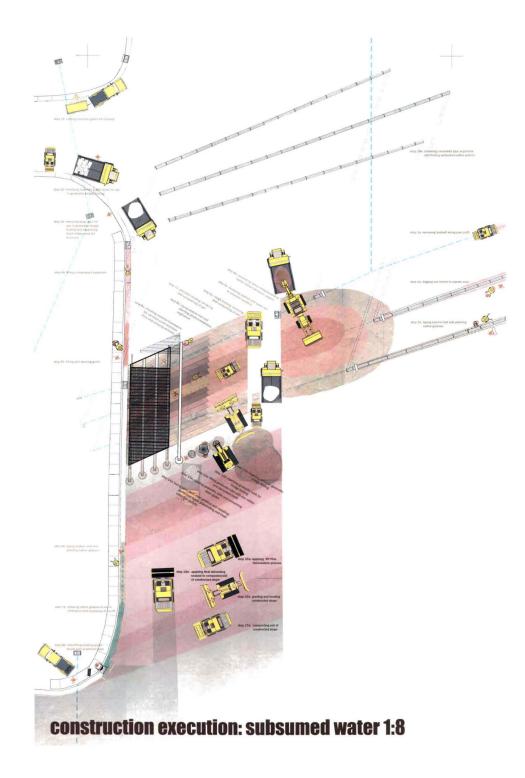


Figure 4:12- Construction Execution: Subsumed Water 1:8

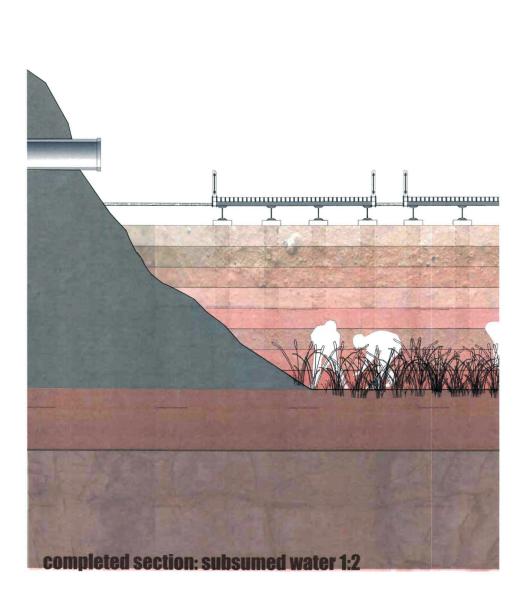


Figure 4:13- Completed Section: Subsumed Water 1:2

<u>Power Grid</u>

By making the power grid visible through inscribing its connections into the asphalt of the parking surfaces it blankets and infilling its distended stretch with ecological programming, its nature is simultaneously exposed, undermined, inverted, and expanded.

The intervention into the system consists of scoring a series of troughs into the asphalt of the parking surfaces and studding them at regular intervals with a blanket of electrode wells, hosting anode and cathode plates. When tied to the existing power grid, the earth itself is charged with a very low electrical current, which encourages the electrokinetic remediation of the soil, allowing heavy metal contaminates to be deposited onto the anode and cathode plates for safer disposal. The scoring of the impervious surface of the asphalt also allows for overall percolation of stormwater, lessening the amount of runoff. The rhythmic indentions of the score subtractions and the raised stippling of the electrode well additions in the parking surfaces serve simultaneously to mitigate speed in the parking lot and to inform perceptions of the surrounding environment– they are both textual and textural reminders to the consumer (Figures 4.14-4.18.)

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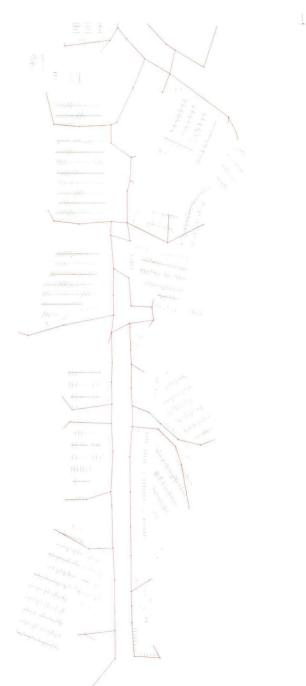


Figure 4:14- Construction Choreography: Power Grid Existing

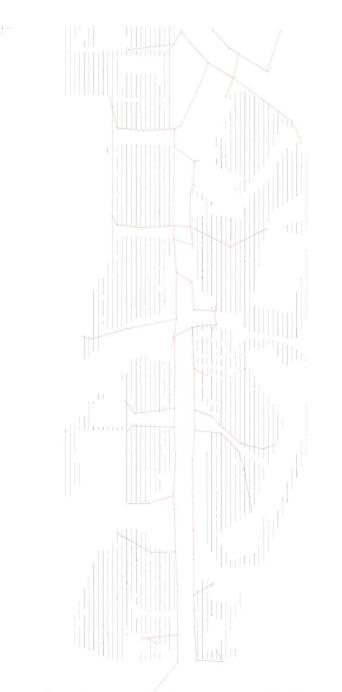


Figure 4:15- Construction Choreography: Power Grid Stage 1

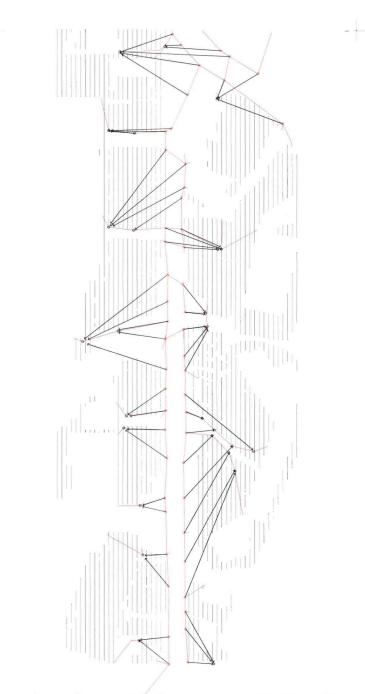


Figure 4:16- Construction Choreography: Power Grid Stage 2

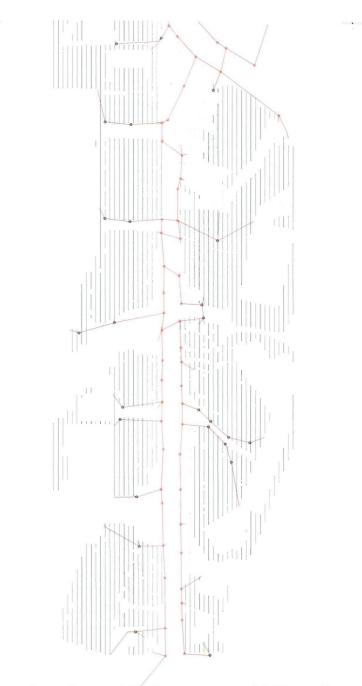


Figure 4:17- Construction Choreography: Power Grid Stage 3



Figure 4:18- Construction Choreography: Power Grid Stage 4

The following steps detail the construction choreography of the intervention to

the system of the power grid (Figures 4.19 and 4.20):

- Step 1a: marking and measuring for coring of asphalt.
- Step 1b: marking and measuring for augering earth.
- Step 2a: coring asphalt and separating asphalt and other material.
- Step 2b: augering earth.
- Step 3a: scoring asphalt.
- Step 3b: furrowing earth.
- Step 4a: running electrical line.
- Step 4b: running electrical line between existing poles.
- Step 5a: inserting electrode well.
- Step 5b: inserting electrode well between existing poles.
- Step 6a: inserting anode and cathode plates.
- Step 6b: inserting anode and cathode plates between existing poles.
- Step 7: tying into existing electrical grid.
- Step 8: excavating and lowering utility pole.
- Step 9: wrapping and mulching utility pole with excavated materials.

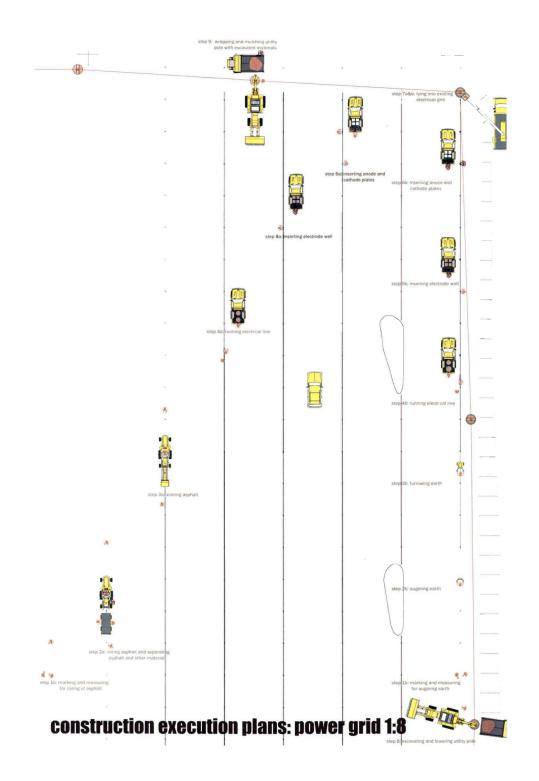


Figure 4:19- Construction Execution: Power Grid 1:8

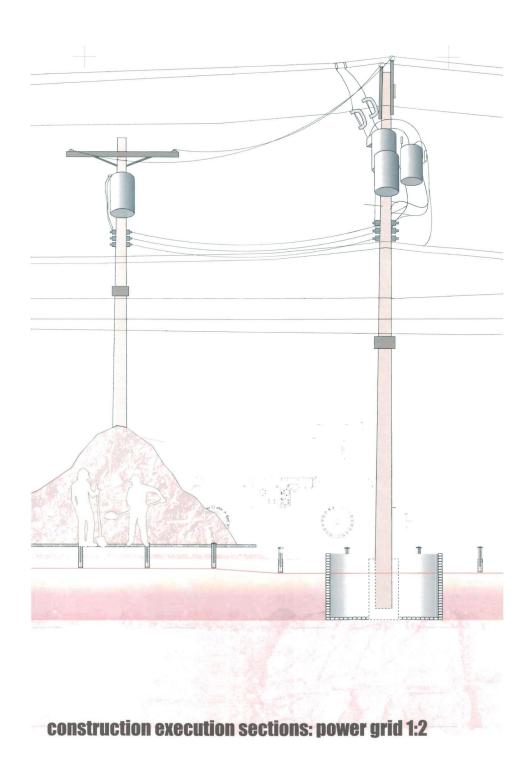


Figure 4:20- Construction Execution Sections: Power Grid 1:2

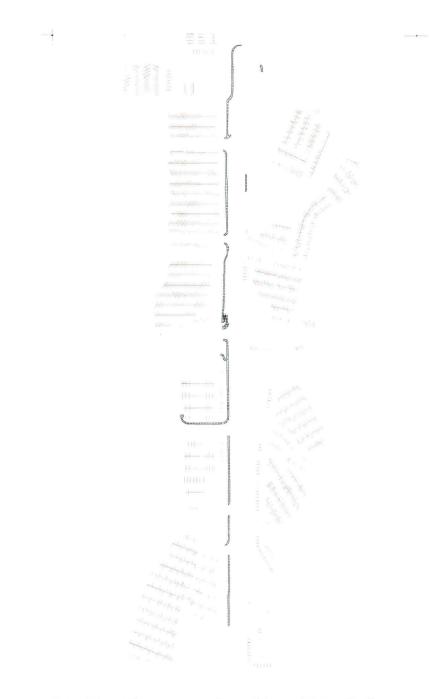
<u>Sidewalk System</u>

By removing and redistributing the panels of the sidewalk system, catalytic commentary on the nature of the pedestrian in the suburban commercial strip environment is introduced, and a new relationship between pedestrian and vehicle is encouraged. The subtraction of the panels and their accretion in unanticipated locations reveals the nature of the constructed environment as veneer. It encourages an invasion of the marginal into the main text of the site through creating a cross-pollinating porosity. Revisions to the typical circulatory routes result.

The intervention into the sidewalk system consists of the scoring and removal of every other panel of the sidewalk and their subsequent redistribution in a new pattern that invades the main text of the site, the parking lot, and invites crosssectional circulation from store to parking area to margin to roadbed to margin to parking area to store and back, rather than the traditional pattern of vehicular-centric circulation. The exposure of earth and the reduction of overall paved surfaces also encourages the percolation of groundwater. Plantings of native grasses in the exposed earth introduces elements of phytoremediation. The contrast of planted materials and bright white paved squares visibly delineates the rise and fall of the underlying terrain,

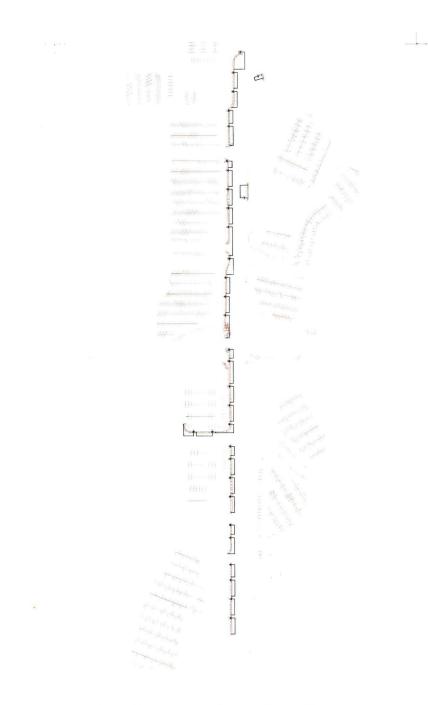
recontextualizing the motorists' surroundings. The alternating rhythm of paving versus plantings underfoot creates a similar effect for pedestrians (Figures 4.21-

4.24.)



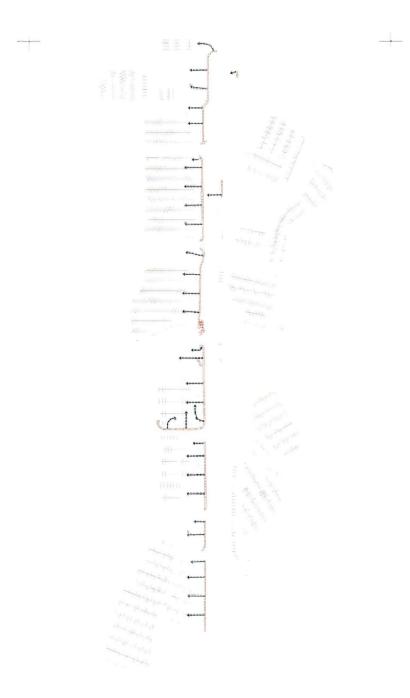
construction choreography: sidewalks existing

Figure 4:21- Construction Choreography: Sidewalks Existing



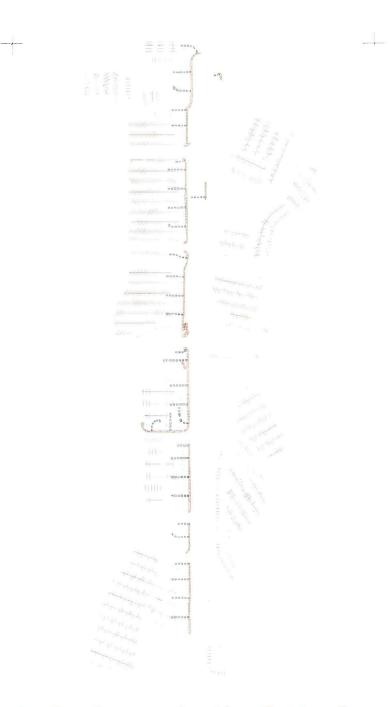
construction choreography: sidewalks stage 1

Figure 4:22- Construction Choreography: Sidewalks Stage 1



construction choreography: sidewalks stage 2

Figure 4:23- Construction Choreography: Sidewalks Stage 2



construction choreography: sidewalks stage 3

Figure 4:24- Construction Choreography: Sidewalks Stage 3

The following steps detail the construction choreography of the intervention to

the sidewalk system (Figures 4.25 and 4.26):

- Step 1a: marking sidewalk panels for removal.
- Step 1b: scoring turf for removal.
- Step 2a: cutting, lifting, and removing sidewalk panels.
- Step 2b: lifting and removing turf panels.
- Step 3a: gathering panels for redistribution.
- Step 3b: gathering turf panels for redistribution.
- Step 4a: redistributing sidewalk panels.
- Step 4b: redistributing sidewalk panels to sloped locations.
- Step 4c: redistributing asphalt panels.
- Step 5: removing slag.
- Step 6: filling and leveling void.
- Step 7: tamping and compacting fill.
- Step 8: distributing Trifolium Bronze Dutch clover seed.
- Step 9: seasonal variation of Trifolium Bronze Dutch clover.

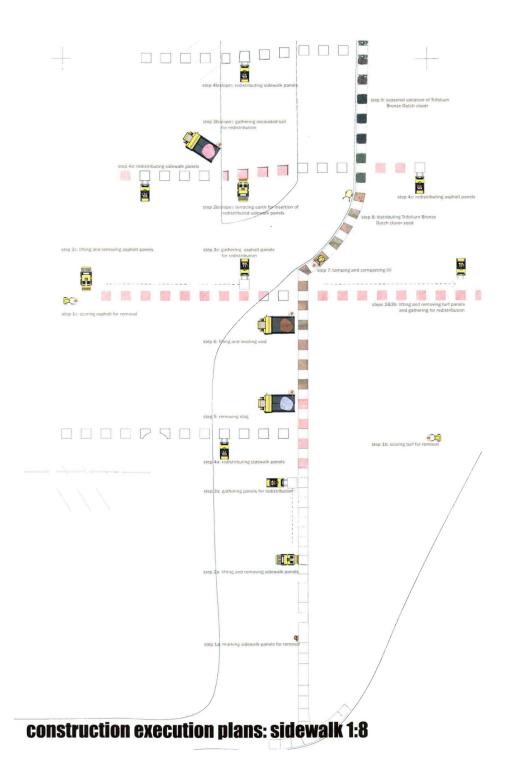


Figure 4:25- Construction Execution Plans: Sidewalk 1:8

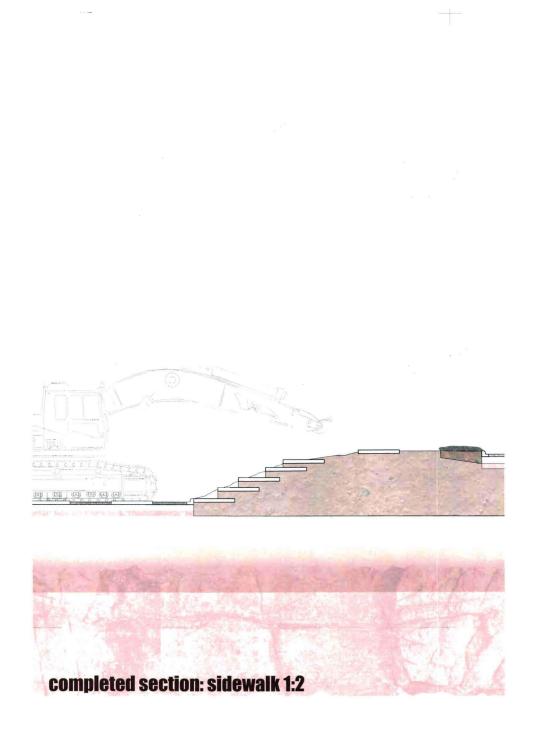


Figure 4:26- Completed Section: Sidewalk 1:2

CHAPTER FIVE

CONCLUSION

In conclusion, the palimpsest of the landscape of the suburban commercial strip, with its revised and rewritten layers of culture, ritual, tradition, and history, cries out for an architectural intervention that challenges its monoprogrammatic nature of consumption. This intervention must simultaneously expose the past, present the present, and predict the future of the place. This is achieved by creating a system of subtractions and accretions that recontextualize the relationship between the main text of the site and the marginal conditions that surround it. This nonconsumptive counterprogramming of the site operates on a multivalent programmatic complexity. The planned interventions re-relate pedestrian and vehicle, pedestrian and landscape, and vehicle and landscape. They also mitigate some of the negative effects of consumption on the landscape while educating consumers about their impact. Finally, the installation of the interventions provides a layer of phenomenology that activates place through the choreography of construction, which leaves its own indelible mark on the landscape, marking this particular moment in the manuscript of time on Tunnel Road.

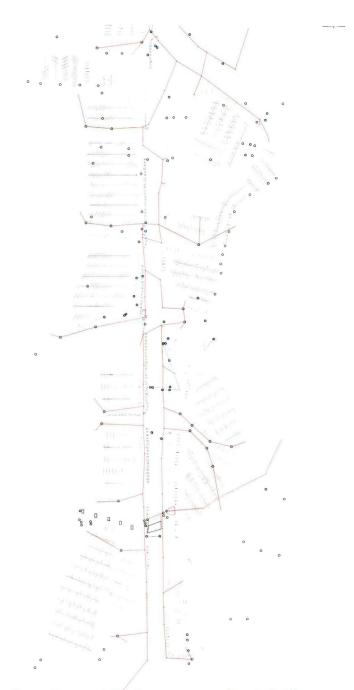


Figure 5.1- Construction Choreography: Composite Existing

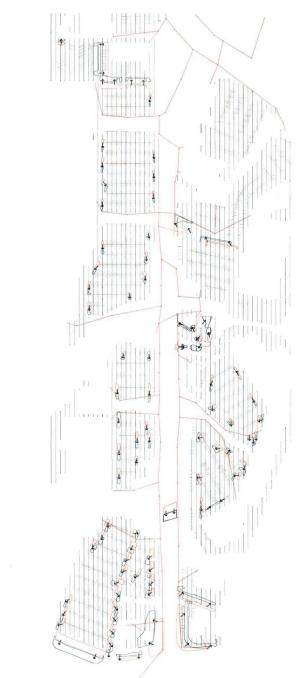
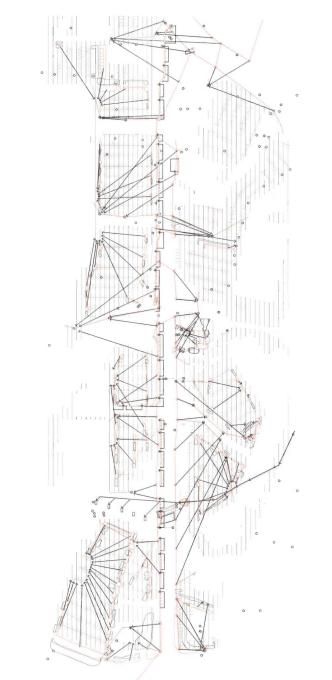


Figure 5.2- Construction Choreography: Composite Stage 1





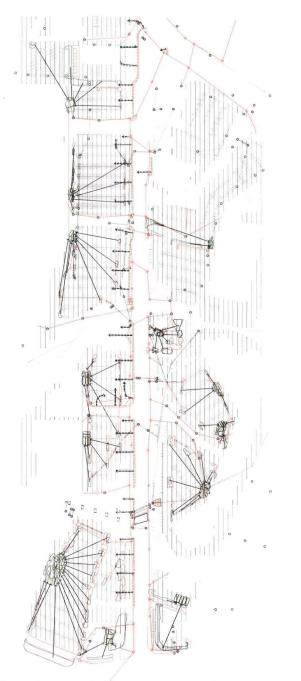


Figure 5.4- Construction Choreography- Composite Stage 3

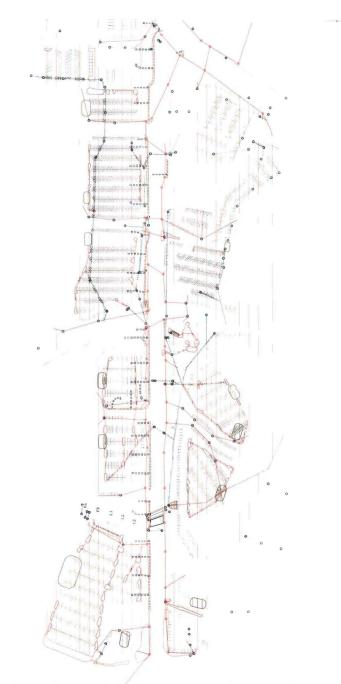


Figure 5.5- Construction Choreography: Composite Stage 4

FIGURE CREDITS

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Figure 3.5- Michael Heizer.

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Figure 3.6- Dennis Oppenheim.

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Figure 3.7- Michael Heizer.

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Figure 3.8- collage by author with photographic content by various others

Figure 3.9- collage by author with photographic content by author

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Figure 3.10- model by author

Figure 3.11- collage by author with photographic content by author and various others

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