Suburban Revisions: Redesigning Suburban Strip Malls

by

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Abstract

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Abstract

The quality of place in the American suburbs often inhibits peoples ability to have a sense of ownership and connection to the places they live. This is partly because the physical design of many suburban environments have repellant and disengaging characteristics. These characteristics have evolved alongside a basic structural transformation of American cities in the last century. In the end, the physical environment of the suburbs makes people feel like outsiders in their own homes because places can push people away through their confused organization and ugliness. In order to unlock the potential for suburban strip centers to be places that help us orient ourselves and connect to our world, I have developed a set of prototypes for the infill of existing strip malls in suburban strip commercial centers. These prototypes act as a systematic tool for the possible widespread densification and diversification of uses within these centers. The coherence and engaging vitality that will result from the application of this tool will improve the quality of place and enhance our sense belonging to our communities.

Thesis Advisor: Paul Lukez
Title: Assistant Professor of Architecture
for Christos and Helena

with hearts like fountains
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Introduction

In the contemporary American city, everything is happening in the suburbs. Most jobs are in the suburbs, and most new jobs are being created in the suburbs. Most housing is in the suburbs, and most new housing is being built in the suburbs. Suburbs have the most births and deaths, and suburbs have the fastest growing rates of crime, drug use, and traffic congestion. In short: all of the things that most people try to avoid in center cities are happening in the suburbs.

Suburban settlement is driven by the popular desire to live in a bucolic setting and yet have immediate access to the culture and opportunity of the city. As suburbs have become more like center cities in terms of services and social problems, the bucolic characteristics of the countryside have faded. In their place is a dispersed and jumbled assortment of buildings, desert-like parking lots, and engineered design that has a numbing and disengaging effect on day to day life. These factors create a repellant and disengaging environment, and thereby inhibit us from forming a sense of connection to the places we live.

However the search for a city/country lifestyle continues, so new development that could potentially improve the existing state of the suburbs instead occurs in the
open land outside the existing edges of the city. The continuing outward spread of new suburban development prevents people from cultivating a sense of engagement and connection to the places they live.

Can we bring the design qualities that promote vitality and coherence to the existing built form of the suburbs in a way that can counteract the repellant and disengaging qualities of existing suburban environments? Can this goal be achieved by adding density, defined public spaces and mixed use areas? And finally, can all this be done in a way that rekindles the suburban ideal of unifying town and country?

Suburban commercial centers are a natural place to start exploring these questions because they are both a source of the problem and a potential source of improvement to the sense of place in the suburbs. The disorganized, unstructured arrangement of buildings in strip commercial centers is disorienting, and the efficient and rational design of strip malls is disengaging. However, along with these problems lies the potential of retail centers in particular to foster a vital sense of place. As Victor Gruen has written of the contemporary role of retail centers;

Given the appropriate design of shopping centers, we can restore the lost sense of commitment and belonging, we can counteract the phenomenon of alienation, isolation and loneliness and achieve a sense of identification and participation. (Rowe, 1991)
Part 1: Suburban Commercial Centers

What Are Suburban Commercial Centers?
Suburban commercial centers are concentrations of industry and commerce located throughout the region surrounding traditional city centers. The development and evolution of these centers is tied to changes in urban spatial structure that American cities underwent in the last century (Clark, 1984). Urban areas that were created by the centralization of jobs and people have been transformed by powerful processes of decentralization. Cities have changed from an industrial model, where a dense mass of people and companies clustered tightly around a single commercial center, to a post-industrial model, where a pattern of low density housing is served by a number of dispersed commercial centers located throughout the entire metropolitan area (Clark, 1984).

Mono-Centric Industrial City
The industrial city conformed to a monocentric, core/periphery model of urban form. The commercial center of the industrial city, or the central business district, housed the manufacturing and office-based activities that formed the commercial heart of the industrial economy. Corporate offices, high order retailers that attracted customers from a broad area, and local services for residents were all located within the central
business district. Immigrants would reside in the areas directly around the central business district and social class would vary with distance from the center, with wealthy white professionals living away from the city center in the bucolic properties of the urban fringes.

The move of many people to the urban fringes was influenced by a widespread desire escape the crowded and sometimes polluted conditions of center cities in favor of living in the countryside (Clark, 1984). People wanted to live in a big house with a bucolic setting and yet still have easy access to the central business district, which provided the leisure amenities and work opportunities that weren't found in the country. With the automobile and an expanding road system, more and more people had access to this lifestyle.

In the 1950's, massive highway construction programs, public policy enacted to facilitate personal ownership of housing and new mass production techniques for building housing quickly propelled the development of the single family housing in the suburbs forward at a very rapid pace. These policies and methods succeeded in meeting a major demand for housing in the years following world war two, and the metropolis expanded outward into new zones of suburban development. By mid century, the central business district was surrounded by an expansive settlement of highly mobile and wealthy
people. These first post World War Two suburbs were primarily residential and served as "bedroom" communities for people who worked and sought leisure in the city center, so even at this point, the metropolitan region could be seen as one region primarily served by a single commercial center.

*Multicentric Post-Industrial City*

Today, commercial centers in contemporary metropolitan cities no longer conform to the monocentric, core/periphery model of urban spatial structure. Instead, the contemporary metropolitan region can be described as a series of separate subregions within which are many distinct metropolitan subcenters (Rowe, 1991).

One explanation for the separation of the metropolitan region into distinct subregions claims that when settlement becomes increasingly dispersed to outer metropolitan regions, the efficiency of the functioning of a city is reduced and problems arise like traffic congestion, high land costs, overcrowding and pollution (Rowe, 1991). The impediment that large city size poses to the efficient functioning of a city strengthens the tendency for functional uses such as retail and office industries to be decentralized throughout the metropolitan region. A highway system that increased accessibility to the region and the need for information and service industries to be near a skilled class of knowledge workers
enhanced the locational freedom of many industries and has propelled this decentralization (Kotkin, 2000).

The result of this decentralization of industry and services is that the suburban metropolitan area is no longer tied to the central business district of the old city center and is now structured by a series of separate and largely independent suburban subregions (Clark, 1984). Each subregion is served by a number of local and regional commercial centers where jobs and retail services are concentrated. It is becoming increasingly difficult to describe the contemporary city with concepts such as “core and periphery” or “city and suburb” because new commercial centers, from local strip centers to regional “edge cities”, are evenly distributed throughout the metropolitan region (Rowe, 1991).

Suburban commercial centers can be roughly divided into two types, regional “edge cities” and community strip commercial centers. The term “edge cities” was coined by Washington Post journalist and author Joel Garreau in his 1991 book *Edge City: Life on the New Frontier*. These suburban metropolitan centers are characterized by modern office towers and huge retail complexes like pedestrian malls, and are always located close to major highways. The archetypal edge city is Tysons Corner, Virginia, outside Washington, D.C.
A community strip commercial center on the other hand is smaller in scale and serves a much smaller population than "edge cities". Strip commercial centers are generally located at the intersection of major arterials, and most often composed of a string of commercially zoned lots that are each independently developed by private developers (Casazza and Spink, 1985). Common building types in these centers are strip shopping centers, office blocks, big box retail, and sometimes, medium density housing like garden apartments or townhouses. Environmental management of development in these areas is limited or nonexistent. These areas are generally driven by profit generation, and seldom prove to be assets to the communities they serve in anything other than a functional sense. An example of a typical strip commercial center, also located in the suburbs of Washington D.C., is the "Seven Corners" area near Falls Church, VA.

The Sense of Place in Suburban Strip Centers
Numerous commentaries that discuss the defects of suburban development focus on the strip commercial center. One of the most common problems cited in reference to these environments is their repellant and disengaging sense of place.

Orientation
Edward Relph writes in his 1976 Place and Placeless-
ness that there is a range of awareness people can have of a place. At one level, places can operate to provide orientation in an environment through the recognition of particular features or qualities of places. For example, sailors in the middle of the undifferentiated ocean can position themselves on the globe using astronomical navigation techniques. Kevin Lynch has shown how the particular characteristics of a place and the distribution of places throughout a city contributes to peoples' formation of a general image of how an overall environment is organized (Lynch 1960). He has shown that the more order there is to an environment, the more agreement there is in the images people form of that environment. The more incoherence there is to a particular environment, the more the resulting image depends on the particular characteristics and experience of the observer.

Empathetic Connection
People also have the capacity to form connections and respond empathetically to places, like the sense of being at home or fondly remembering the place where you experienced your first kiss. Even in the suburbs, people can have an empathetic connection to place. In The Village in the City (1973), Nicholas Taylor wrote about the undifferentiated postwar English suburbs that “the home-centered nuclear family can have a feeling within itself that it belongs somewhere, in a definite place:
unique people within a unique environment, with powers of responsibility for ordering their own lives”. Building on the idea that a community can have a discontinuous connection to place, Edward Relph writes of the suburbs that “what appears from the outside to be homogeneous and placeless, is from within closely differentiated into places by the personalization of property, by association with local events (or organizations) and the development of local myths and by being lived in” (Relph 1976).

Repulsion and Disengagement

But a place can be repellant, and strip commercial centers are notorious examples of this. These places are especially confusing and offensive, and no one wants to be connected to a place that’s disorienting and ugly. Peter Rowe distinguishes three kinds of incoherence that result in peoples rejection of these places in his Making a Middle Landscape (1991).

First, places in the suburbs can be rejected because they are “cacophonous, and chaotic.” Suburban strip commercial centers epitomize this environment, where buildings are seemingly strewn about with no apparent logic, and there is an overall perception of disorder and jumbled confusion in the environment.

Incoherence can also result from monotony, predictabil-
ity and banality (Rowe, 1991). Again, strip commercial centers are notorious examples of these qualities. The bland, repetitive boxes that house retail centers and the desert-like parking lots surrounding them are numbing.

Finally, Rowe explains that a third way a place can be incoherent is when there is a lack of conformance between what we might expect from a place and what the place actually is. The response to this kind of environment is generally a sort of "mistrust or disbelief". For example, the jumbled confusion of a strip commercial center may convey a degree of overall complexity in an environment. However, while complexity may be conveyed at one scale, individual buildings such as strip malls convey a kind of disengaging efficiency in their design that can contradict expectations of complexity that stem from the overall environment.

All of these forms of incoherence in strip commercial centers can result in the same feelings of "disassociation, personal distancing, and disowning" of the places in which we live (Rowe 1991). We feel like outsiders in our own homes because the places we desire to be connected to most push us away through their confused organization and ugliness. Places can potentially help us orient ourselves in our world, both literally and metaphorically, but in the suburbs we only feel lost.
The sense of being an outsider is commonly lamented in commentaries on the modern condition, but this is surely not caused by the quality of the physical environment alone. However, as many architects and social critics argue, a physical setting can make it easier for people to feel connected to the places where they live. The physical quality of a place is intertwined with cultural and economic conditions that all contribute in different ways to giving an environment a sense of place. But design is an important factor, and places can be designed so as to enhance our sense of orientation in the world and our sense of belonging to our communities.
Part 2: A Proposal to Redevelop Strip Centers

Does it Make Sense to Make Dense?

The contemporary metropolitan city has a decentralized pattern of growth (Rowe 1991). This means that when new growth occurs it seldom takes a form that adds density to existing environments. Rather, most new growth occurs in the next layer of undeveloped land outside the existing edges of the older suburbs. While a motive behind this pattern of growth is to preserve natural open space, it effectively perpetuates the problem of place in strip commercial centers.

The Suburban Ideal

The drive to preserve natural open space has influenced the spread of this type of development. Natural open space is the sacred cow of the suburbs, and the design of suburban developments is intended to integrate buildings with a natural setting. This stems from people's desire to live in a big house with a bucolic countryside and yet still have easy access to the leisure amenities and work opportunities in the city. Ebenezer Howard, in his Garden Cities of Tomorrow (1902), offers a lucid description of this utopian ideal.

...But neither the town magnet nor the country magnet represents the full plan and purpose of nature. Human society and the beauty of nature were meant to be enjoyed together. The two magnets must be made one...The town is the symbol of society - of mutual help and cooperation, of fatherhood, motherhood, brotherhood, sisterhood, of wide relations between man and
man - of broad expanding sympathies - of science, art, culture, religion. And the country! The country is the symbol of God's love and care for man. All that we are and all that we have comes from it. Our bodies are formed of it; to it they return. We are fed by it, clothed by it, and by it we are warmed and sheltered. On it's bosom we rest. Its beauty is the inspiration of art, of music, of poetry. Its forces propel all the wheels of industry. It is the source of all health, all wealth, all knowledge. But it's fullness of joy and wisdom has not revealed itself to man. Nor can it ever, so long as this unholy, unnatural separation of society and nature endures. Town and country must be married, and out of this joyous union will spring a new hope, a new life, a new civilization.

However with most new development occurring in the undeveloped land on the metropolitan fringes, many existing strip commercial centers faced with a state of arrested development. Focusing new growth on existing strip commercial centers offers hope for improving their quality of place. However doing this has implications for the pattern of growth in the entire metropolitan region. There is currently a debate among architects and planners about how we should alter the pattern of growth in metropolitan regions (McLaren, 1992).

The Pro-Density Camp
A prevailing position supports the reversal of the post-war patterns of development (where growth is decentralized) in favor of re-densifying the center city. A major concern in this position is the idea that cities can be more sustainable, both in terms of their environmental impact and their livability, if they were dense and compact. The scope of a city's impact on the natural environment, it is argued, would be greatly reduced in a
denser city, and open space would be preserved for agriculture or natural reserve. The energy expended through the rational use of transit that denser environments can enable would be less than the energy expended by an automobile oriented transportation system. Densification would also have the ability to revitalize communities through the mixing of uses at street level. Safer and pedestrian friendly environments would then be created that enhance the quality of place in the city and would serve as an engine for economic development. Ultimately, a dispersed and continually expanding form of settlement is considered to be unsustainable.

*The Anti-Density Camp*

Nevertheless, there is also a contrary view among architects and planners that is against increasing the density of cities. Here it is said that dispersed settlement is only marginally more energy intensive than concentrated development. Also, it is argued that merely making city centers more dense doesn’t increase transit use because people will not give up the freedom of personal mobility offered by the automobile. Density, in this view, will only create automobile congestion in center cities. The increased congestion then would lead to reduced air quality, exacerbated microclimates, a depletion of the amount of available green space, and increased travel time from location to location.
The Compromise Position

Some architects and planners believe that densification of cities is the most viable and effective answer to the present unsustainable and placeless character of metropolitan cities, while others believe in leaving things in their dispersed form. Yet perhaps a third, more moderate approach has the most value, especially in the face of the impracticality of changing or abandoning the basic infrastructure of metropolitan cities. This position supports an increase in the density of development, but within the existing structure of the metropolitan city, and is more like a form of decentralized concentration where new development would be focused on existing suburban centers. With this approach, we can reduce the dependence on the private automobile rather than force it's elimination, and we can greatly improve the quality of place through mixing uses and defining public places.

The idea to pattern urban growth into a series of dense centers surrounding the traditional city center is hardly a new idea. Perhaps the most influential proposal that supports a decentralized concentration of development was the Garden City, proposed by Ebenezer Howard in 1902. The Garden City idea is a proposal for a solution to the problems of sanitation and overcrowding of industrialized London in the early nineteen hundreds. Ebenezer Howard proposed founding a series of new

![Diagram of Garden City Model for Regional Growth, Ebenezer Howard (Howard, 1965)]
towns, or “Garden Cities,” that would distribute population throughout the region around London. This proposal is based in the utopian ideal of forming a perfect union between the countryside and the town. While the specifics of this proposal belong to the time and place of London in the late 1900’s, it’s spirit and basic principles can still apply to our cities today.

A new pattern of growth that adds density to existing strip commercial centers can be an effective remedy to the repellant qualities of these places. Through density, strip centers can convey the coherence and vitality of our center cities. However they should do so in a way that in a way that rekindles the suburban ideal of unifying town and country.

*Density and Quality of Place*

Increasing density can produce as many problems as it solves, and does not guaranteed that an environment will have a high quality of place. The complexity of the relationship between density and quality of place is shown in the following diagram (Acioly and Davidson, 1996).
There are four extreme categories represented by the two axes of the diagram, the high density advantage environment, the high density problem environment, the low density advantage environment, and the low density problem environment. One possible way of understanding the implications of this diagram is to relate these categories to real world environments.

One example of a high density advantage environment is the Back Bay neighborhood in Boston, Massachusetts. The Back Bay is characterized by strong or dominant pedestrian and transit oriented transportation sys-
tems, a coherent organization of buildings to define exterior public spaces, and a complex organization of uses that overlaps different functions in the same area. Activity at the street level creates safer environments, and potentially the experience of diversity and serendipity. However, it is telling the Back Bay has a woefully inadequate supply of parking spaces.

An example of high density disadvantage environment is Dallas, Texas. Dallas is characterized by an automobile oriented transportation system which causes congestion and air pollution, a discontinuous organization of buildings often times separated by paved open space areas on city blocks dedicated to automobile parking, monofunctional zoning, and very little pedestrian activity on city streets. Dallas is experienced almost entirely from the interior of an automobile, and the lack of pedestrians on the streets makes an evening walk through the city a bit of a dangerous venture. Many downtown districts in the contemporary American cities are this type of environment.

Palladio's Villa Rotunda near Vicenza, Italy (1560's) is an exemplar embodiment of the low density advantage environment. This Villa is characterized by solitude, seclusion and harmony with nature. These environments function best in conjunction with high density advantage environments, where there is a balance created between a life among nature and a life within the...
culture of the city. This ideal is a major motive in the
development of the American suburbs, however the ex-
treme to which this was pursued caused the advantages
of this environment to turn to problems.

Finally, the American strip commercial center is an ex-
ample of a low density problem environment. These
places are characterized by a jumbled or disorganized
organization of buildings that attempt to blend into a
natural setting but end up creating an ambiguous bal-
ance between urban and rural environments. Trans-
portation is primarily automobile oriented and there is
little allocation of public or community spaces. Subur-
ban strip commercial centers are the embodiment of
this type of environment.

A Design Approach
Concept
The current design of strip commercial centers causes
feelings of dissociation, personal distancing, and dis-
owning of a place. No one wants to claim a place as
their own if it is ugly, disorganized and boring. How-
ever, if the design of strip centers did not impede con-
nections to place, then whole communities that are
served by a particular strip center could potentially have
a sense of unity through their attachment to a common
place. This is a potential that is not currently exploited
in the suburban metropolis. Through the considered
densification of building area and diversification of uses, we can unlock the potential for strip commercial centers to become places that aid rather than impede the connection to place.

This densification can take many forms, from the addition of just a few highly dense buildings dispersed throughout the area, to the full scale continuous densification of all sites producing something like a dense urban street. However, the suburban ideal involves a union between town and country, therefore density should be considered in combination with reclamation of natural open space. Organizing strip centers into dense, distinct clusters of buildings is a development tool that has been used in the suburbs to preserve large areas of natural space. In Radburn, NJ, clustering housing allowed the planners to achieve the same densities as more typical suburban developments while preserving large areas of open space dedicated for communal use. This cluster development model should be used in strip commercial centers but in a way that increases their overall density.

Goals and Objectives

Goal:
Use clusters of increased building density to introduce a comprehensible, over-arching order to strip commercial centers
Objectives:
- Establish focal points in the form of public spaces or particular buildings to give legible points of reference that help organize navigation of the area and make it more comprehensible.
- Form continuities and connections between particular places to give the area more unity and accessibility.
- Define common edges and boundaries for built form to define the strip center as a distinct and unified place.

Goal:
Enhance the richness of experience of particular places in strip commercial centers.

Objectives:
- Inject a varied but organized mix of uses into new development to extend the amount and type of activity that occurs in public and to enable serendipitous encounters.
- Add to and adapt the existing built environment, rather than demolish buildings, to preserve traces or remnants of old buildings that give clues to the former life of a place and enhance a sense of history.

Strategy
The physical organization of strip commercial centers can be thought of as a system of modules. Each individual building and parcel of land, be it a strip mall or an
office building, is a single module that is organized with other modules in a series along major roads and intersections. The advantages of this system come from the fact that land ownership is distributed between many different parties and that the development and functioning of a project on any particular parcel of land in a strip commercial center is completely unconstrained by the development and functioning of projects on other parcels of land in the same center.

While this system is very flexible and can therefore make it easier for land to be developed, it is also one of the causes of the current problems of organization in strip centers. The lack of over-arching control for the organization of new development has contributed to a strip center's jumbled mess. However, when we consider the implementation of a remedy to this problem, rather than count on the unlikely event that a municipal authority or enlightened private developer will buy or claim a number of adjacent plots and institute large-scale maneuvers to improve the quality of place, it may be more realistic to take advantage of the benefits of a modular approach in a more regulated and controlled way.

There is a great deal of regularity from strip center to strip center, and this comes from the highly typical way that existing development modules are organized. In
most strip centers throughout the nation, lot sizes and building types are highly standardized and are limited to a few standard sizes and layouts. The implementation of this plan's goals for the redevelopment of strip centers can take a systematic form by centering on the development of a set of prototypes for the alteration of existing strip center modules.

Where to Begin?
There are only a few modular types employed in strip commercial centers. The most common are the strip shopping center and the stand-alone office slab. It can be argued that the strip shopping center, or strip mall, has the most negative impact on the quality of place. Their vast parking lots and shoddy architecture do little to define street edges or make public places. Yet their retail function makes them a common ground for the entire surrounding community. Focusing new development on existing strip malls would therefore be productive starting point to unlock the potential of place in strip commercial centers.

The design of a strip mall is based on achieving the most efficient and effective distribution of retail goods to customers accessing the center from an automobile. These buildings usually consist of one or two large-scale anchor stores such as a supermarket or department store, and a string of smaller accessory shops. Plenty
of parking is provided in the form of large paved surface lots, and is designed so that spaces are as close as possible to store entrances. Most strip shopping centers provide parking at high ratios of, on average, 5 to 7 spaces per 1000 square feet of leasable space. Accordingly, building frontage is often set far back from the street edge to make plenty of room. Larger anchor tenants require a high degree of visibility to people in automobiles traveling on main roads at potentially high speeds, so any buildings closer to the street edge are kept low and dispersed so as not to obstruct the view to the anchor stores.

The development of a set of modular prototypes based on increasing the density and diversifying the uses within existing strip mall modules should attempt to integrate the important issues of retail distribution into the new prototype design. However, strip mall design based on the engineered distribution of retail must be compromised to some degree if the quality of place is to be improved.

*Inventing the Prototypes*

A prototype is a generic design scheme for a building or group of buildings. Prototypes are designed to convey essential ideas that can be applied many times over to different specific cases. They can also define a family of buildings in such a way that anyone who understands
the prototype will be able to design specific members of this family. They are usually represented as very schematic drawings so that there is enough ambiguity and freedom in the solution to allow designers to adapt the scheme to the specific limitations of site conditions, client needs, local cultural context, etc. The general purpose of a prototype, then, is to provide guidelines that will generate a large number of specific buildings or environments (Alexander, 1968).

An interrelated set of performance requirements needs to be met in order for a new prototype design to be able to achieve an environment in strip commercial centers that functions well, has vitality, and can unite the entire commercial center with a consistent and continuous sense of order. A densified strip mall should be able to have a mixed set of functions, accommodate parking demand, be accessible from the street and from its surroundings, and aid in defining the overall environment of the strip commercial center. Is it possible to develop formal prototypes that meet all these criteria? I will explore this possibility by inventing a set of formal patterns and testing them according to how well they perform different sets of criteria. This process is illustrated in the diagrams shown on the next page.
Each matrix sets up a comparison between a set of formal patterns and a set of performance criteria. Within each matrix, a designer makes determinations about whether it is probable (P) or improbable (I) that a particular formal pattern will lead to an adequate solution for a particular set of criteria. The formal patterns that are determined to be probable solutions to a first set of performance criteria are then tested against the next set of performance criteria and the improbable solutions are discarded. This process continues until each group of surviving patterns has been sequentially tested against each set of performance criteria until at the end there is a set of formal patterns that are candidates for redressing the blight of the suburban commercial landscape.

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P: probable solution
I: improbable solution
Part 3: Testing the Patterns

Test 1: Context/Pattern

Contextual Conditions:
New development should be constrained by the scale and function of adjacent developments and infrastructure. Four different contextual conditions have been derived from existing situations. While these four types of contexts are not comprehensive, they account for common situations in strip commercial centers.

Constraints for Infill Patterns:
- Each pattern should distribute buildings' mass throughout the strip mall parcel to fill up a high proportion of the parcel's open space.
- Infill should define the edges of the parcel to allow for relationships to adjacent land uses and roads and to define the overall environment in the strip commercial center.
- The internal organization of the infill should promote complexity or variety in terms of possible spaces or uses.
- As a way to organize the ways that building mass can be added to an existing site, infill patterns should conform to five thematic categories that attempt to describe potential qualities for the organization of infill. The five themes are “edge”, “wrap”, “village”, “layer” and “agora”.

Typical Contexts

Legend
- Collector
- Arterial
- Existing strip mall
LR: Low-density residential
HR: High-density residential
CM: Commercial
edge
maximizes development along existing street edge

Infill Patterns

agora
inward- looking internal public space

village
fine grained distribution of buildings and internal circulation network

layer
multi-level development, preservation of the ground plane

wrap
encasing, enveloping and surrounding the existing building
☐: probable solution  ❏: improbable solution
A densification of suburban commercial strip centers would require a reconsideration of existing infrastructure systems in terms of their ability to support a larger and more concentrated population. Some propositions about the redevelopment of the suburbs advocate a shift from automobile oriented transportation towards a system of public transit (McLaren, 1992). Transit stops would serve dense centers of development scaled to promote the accessibility of pedestrians from public transit stations. The viability of pedestrian forms of transportation and the quality and quantity of public transit systems can be improved without the elimination of automobile transportation. Some planners argue that public transit would work best in conjunction with the existing transportation infrastructure by reducing rather than eliminating the current dependence on the private automobile.
□ : probable solution  □ : improbable solution
Test 3: Patterns/Parking

General Statement:
Most often, the first consideration in new suburban development is parking, not architecture (Lee, 2000). The parking solution drives what can be built because the only means of accessing places in the suburbs is with an automobile, and it takes far more space to provide parking for cars that it does to house people or provide services. Because parking structures are very expensive to construct, and because there is a constant push to provide free parking, demand is met in strip commercial centers by an excessive supply of paved surface parking lots.

The best way to solve the parking problem is not to provide more parking, but to reduce the need to drive. By mixing housing, office and retail uses, it is possible to access services without driving. Thereby the number of cars on the road would decrease and there is the potential to reduce problems of congestion.

The retail functions of strip centers are meant to serve a broad area, so parking is still a necessary concern. However, some criteria for handling parking allow for the accommodation of higher densities of development while reducing the visual impact of large surface lots.
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: probable solution   : improbable solution
□ : probable solution □ : improbable solution
Test 4: Patterns/Use

General Statement:
Functional zoning is based on separating uses into a coarse pattern of monofunctional zones. This method is intended to promote efficiency in the sense that uses in one area will not limit the functioning of another area, either through the normal everyday operations of a particular zone or through changes made within a zone (Lynch, 1956). However, functional zoning has led to sterile and monotonous environments, and as a remedy to this problem, there has been a recent push among planners towards mixed use zoning.

Mixing uses can promote urban vitality, by making places more lively and providing efficient access to services. However, while mixing uses is a crucial consideration but it is rarely sufficient in and of itself to promote urban vitality (Rowley, 1996). The size of housing units, the scale of the buildings, the presence of public space are all important considerations. Housing density is especially important. Jane Jacob’s in The Death and Life of Great American Cities (1961) concluded that an adequate density for vital urban places is at least 100 dwelling units per acre. While there is no generally accepted threshold for the amount of density needed to promote a vital urban environment, the point is that mixing uses alone does not get the job done.

**Use Criteria**

- **storefront office**
  - can be located throughout site along pedestrian oriented roads and access ways

- **housing: flats**
  - located to enable privacy, can be combined with storefront retail and storefront office

- **storefront retail**
  - can be combined with any other use with an emphasis on public space frontage

- **anchor retail**
  - must be highly visible from main roads and easily accessible by customers and service vehicles.
  - principle location along arterial edge.

- **slab office**
  - scale and access needs require placement to be along major street frontage.

- **public space**
  - common exterior space located to unify retail, office and housing.
probable solution
improbable solution
☐: probable solution  ■■: improbable solution
The Survivors
Part 4: Application of Prototypes

Virginia Suburbs of Washington D.C.; Annandale, Fairfax County

Annandale; Strip Commercial Center
Annandale; Existing Plan

Annandale; Location of Existing Strip Malls
Annandale; Plan After Application of Prototypes and Concurrent Redevelopment

Annandale; Plan Showing Location of New Public Green Space
Annandale; Figure/Ground Drawing of Existing Site

Annandale; Figure/Ground Drawing of Proposed Design
Annandale; Model of Existing Site

Annandale; Model of Proposed Design Showing New Public Green Space
Annandale; Edge Type (City) Redevelopment of Existing Strip Mall

Annandale; Agora Type (Complex) Redevelopment of Existing Strip Mall
Conclusion

There are two main issues involved in the process of developing a design prototype that require much debate and further experimentation. The first involves the sequence in which the tests occur. The second concerns the types of information that informs the design criteria and how decisions are made about the rules that are established.

Determinations made about the sequence of the testing, whether “use” is the first test or “access” should be, may be a factor in the production of a set of survivors. For example, different sets of survivors may be composed of totally different patterns depending on the sequence in which the tests occur. I began with access because the infrastructure would give the “skeleton” upon which other things rested. But maybe “use” should have been the first test, and if it was, would the ultimate outcome have been the same?

And of course, the determination of the design criteria is critical. Whether the criteria is informed by aesthetic concerns, market conditions, or people’s lifestyle preferences, there must be an intensive process of testing the criteria and establishing as objective a basis for the rules as possible. Statistical and market analysis should mesh with design and aesthetic objectives.
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