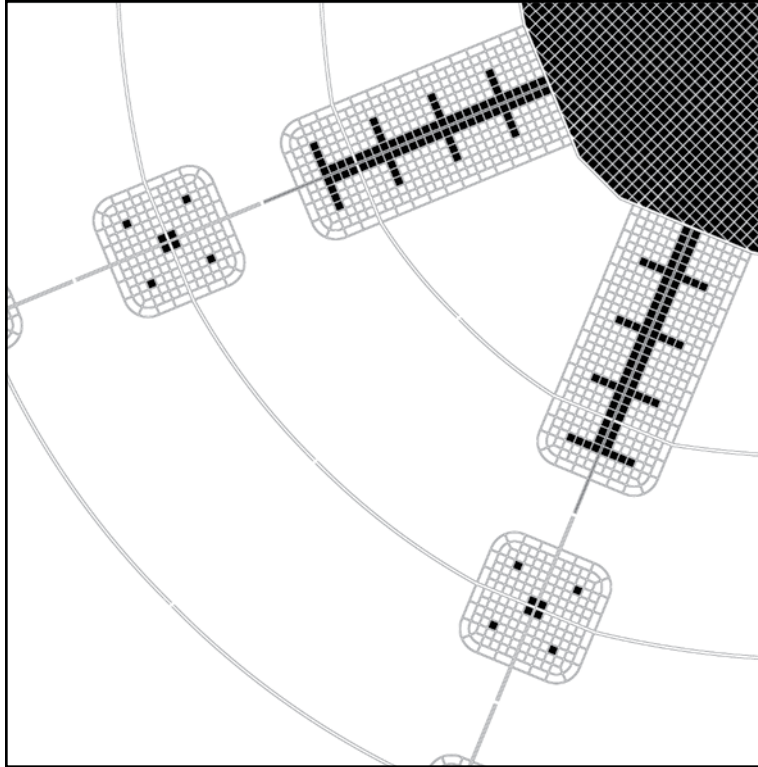
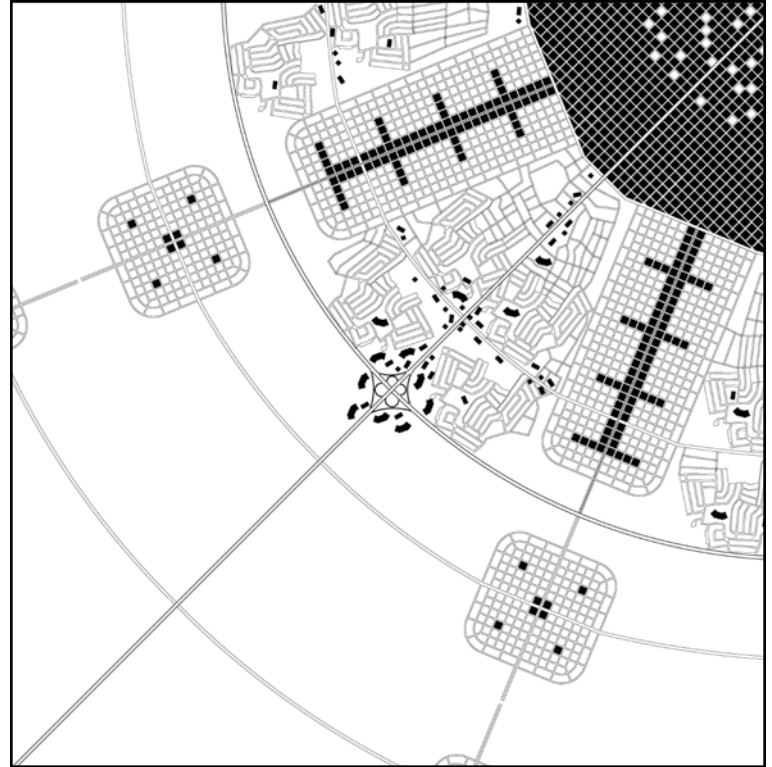


# R E T R O F I T - I N F I L L

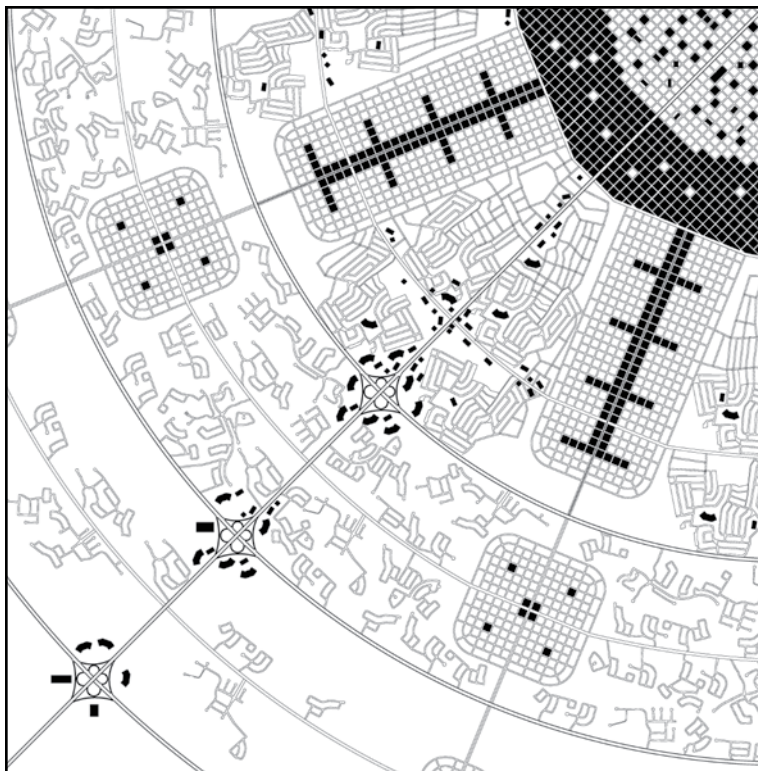
SUBURBAN RETROFIT AND INFILL - A LEXICON OF ADVANCED TECHNIQUES



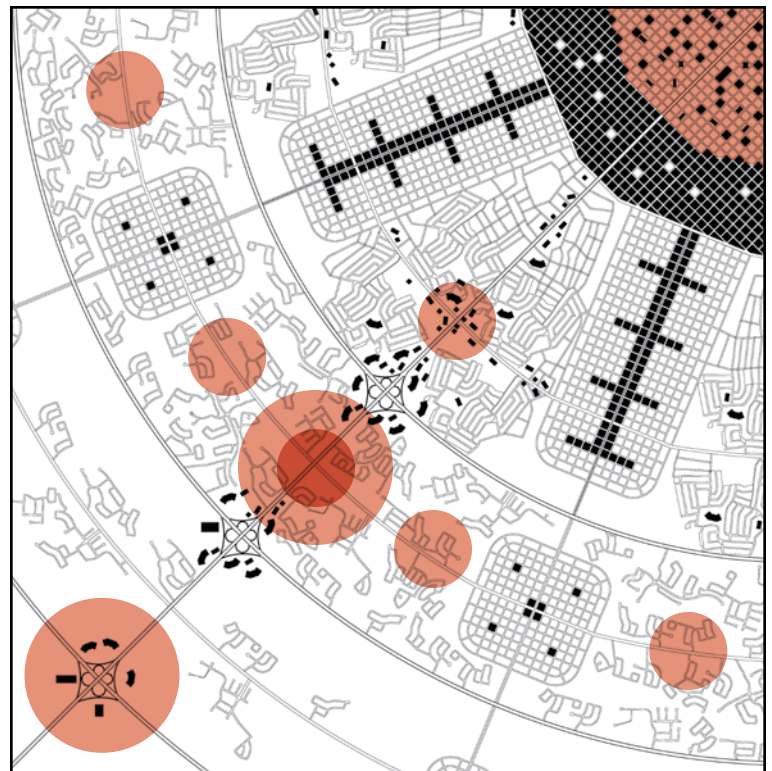
First Generation Suburbs (Traditional Growth Pattern)



Second Generation Suburbs (CSD)



Third Generation Suburbs (CSD)



Retrofit/Infill of CSD (TNDs and TODs)

Today we are faced with an overwhelming quantity of suburbia. We need to transform this quantity into pockets of quality. Sprawl will not mature independently into vibrant, sustainable communities; sprawl is inflexible. It may simply evolve into different patterns, though not necessarily benevolent walkable urbanism. Therefore, transformation needs to be guided through a conscious act of will. Without an aggressive intervention, suburbia may become, as James Kunstler predicts, a devalued agglomeration of enclaves and slums. Given the sheer amount of resources used to propagate and abandon suburban development, the prevention of such consequences benefits society not only socially and economically, but also environmentally.

The New Urbanists have a responsibility to provide alternatives to the tragic perception that sprawl is irreversible. Not as optimistic as suburban polycentrists, nor as pessimistic as the survivalists, the New Urbanists are pragmatic. Sprawl may never be as well-balanced and as urbane as traditional American towns and cities, but it must be retrofitted and transformed into sustainable and livable centers.

In recent years, many New Urbanists have been working on a range of design, implementation and finance techniques to enable suburban retrofit and infill. At the regional level, they have master-planned suburbanized counties and municipalities, rationalizing a new system of urban growth patterns and connecting multi-modal transportation networks.

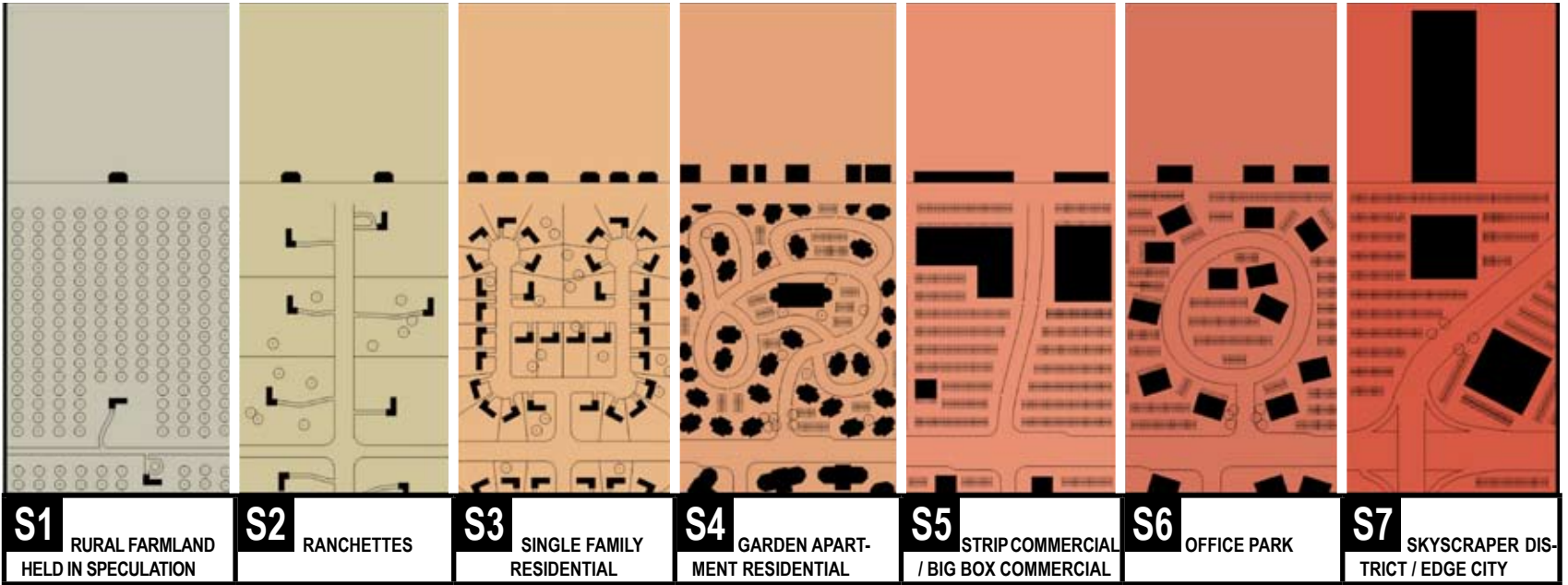
At the community scale, New Urbanists have introduced neighborhood structure and dense, mixed-use land utilization, repairing worn suburban fabric. This will not necessarily transform suburbia into urban density, but it will introduce urban foci in order to serve the surrounding ring, and balance the often dysfunctional nature of suburbia.

Lastly, New Urbanists have introduced new transitional typologies at the scale of the block, street, and building, and existing structures (such as malls, shopping centers, suburban houses, townhouse and apartment enclaves, and office parks) have been retrofitted or reused, ultimately included within a coherent neighborhood fabric.

This direct, empirical knowledge will be translated into practical steps for retrofitting and redeveloping the full range of prototypical suburban conditions.

# R E T R O F I T - I N F I L L

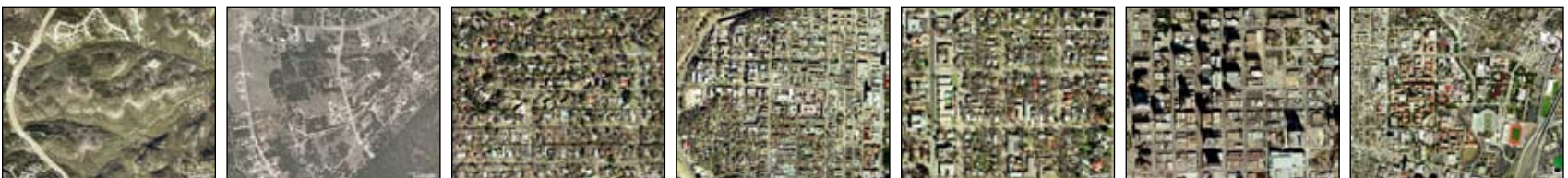
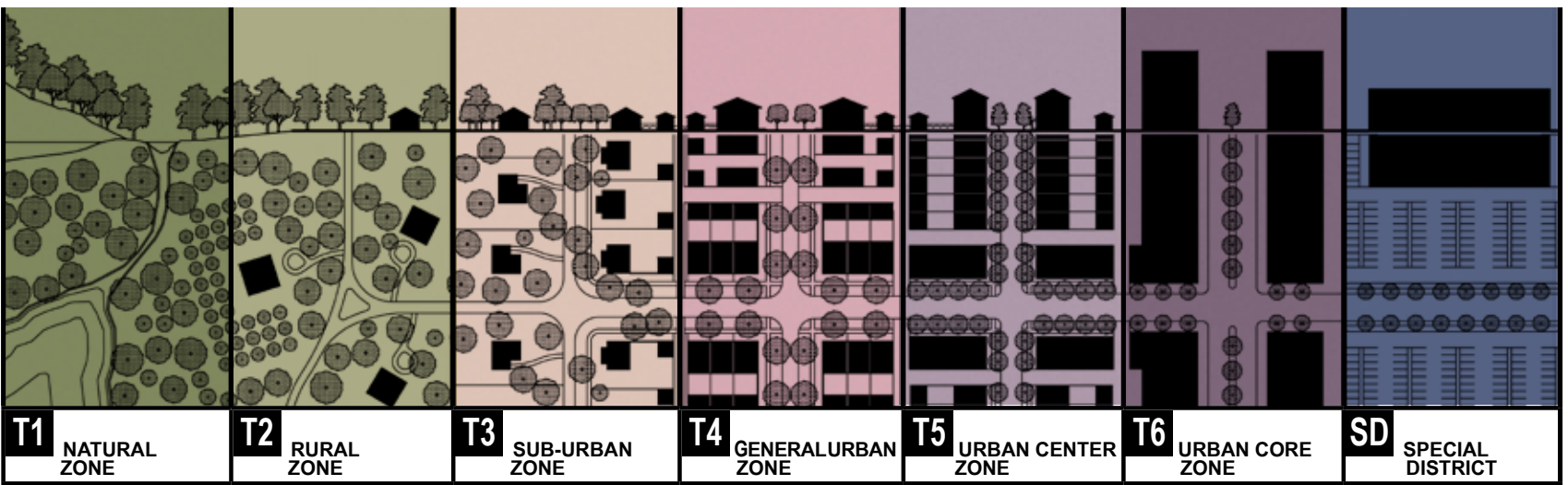
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Suburban transect prepared by Dan Zack



Suburbs of Austin



City of Austin

# R E T R O F I T - I N F I L L

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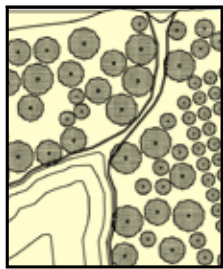
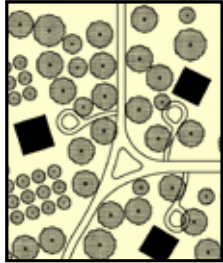
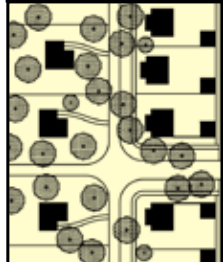
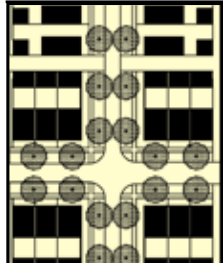
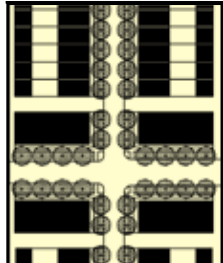
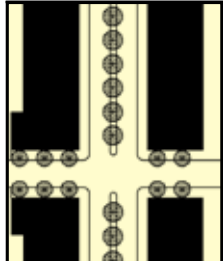
**Conventional Suburban Development Descriptions.** The following are general descriptions of the character of suburban sprawl zones.

	<p><b>S-1 NATURAL/ OPEN SPACE</b> Consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, and other existing conditions.</p>	<p><b>General Character:</b> Natural Landscape and/or agricultural use <b>Building Placement:</b> Not applicable <b>Frontage Types:</b> Not applicable <b>Typical Building Height:</b> Not applicable <b>Type of Civic Space:</b> Parks and greenways</p>
	<p><b>S-2 RURAL FARMLAND</b> Consists of agricultural land and other large land tracts, often held speculatively near the encroaching edge of Conventional Suburban Development.</p>	<p><b>General Character:</b> Primarily agricultural, but may include woodlands, wetlands, other natural features and scattered buildings (farms, barns, sheds, silos) <b>Building Placement:</b> Not applicable <b>Frontage Types:</b> Not applicable <b>Typical Building Height:</b> 1-to-2-storey <b>Type of Civic Space:</b> Farmland and greenways</p>
	<p><b>S-3 RURAL SPRAWL</b> Consists of single-family detached houses located on 1/2 acres or larger. Setbacks are relatively deep and the infrastructure is sporadic. Automobile access is crucial.</p>	<p><b>General Character:</b> Landscaped and naturalistic planting, large lawns, rural roads, limited pedestrian activity, no city services, rural sprawl <b>Building Placement:</b> Large and variable front and side yards <b>Frontage Types:</b> Setbacks Yards, fences, naturalistic tree plantings <b>Typical Building Height:</b> 1-to-2-storey <b>Type of Civic Space:</b> Parks and Greenways</p>
	<p><b>S-4 HOUSING POD</b> Consists predominantly of single-family detached housing pods on small or medium or large lots. Segregated by market segment. Medium front Setbacks yield front lawns and large backyard.</p>	<p><b>General Character:</b> Dendritic street network, cul-de-sacs and collector roads, snouthouses and dingbats, occasional pedestrian activity, lack of block structure <b>Building Placement:</b> Variable front and side yard <b>Frontage Types:</b> Setbacks Yard, fences, manicured lawns and landscaping <b>Typical Building Height:</b> 1-to-2 storey, some 3-storey <b>Type of Civic Space:</b> Remnant open space</p>
	<p><b>S-5 GARDEN APARTMENTS POD</b> Sector of attached and detached multi-family housing. Townhouses without towns, auto-dependent</p>	<p><b>General Character:</b> Large parking lots, homogenous, occasional pedestrian activity, lack of block structure <b>Building Placement:</b> Random, "train wreck" pattern <b>Frontage Types:</b> Parking lot <b>Typical Building Height:</b> 2-to-4-storey <b>Type of Civic Space:</b> Privatized resident gyms, tennis courts, and pools</p>
	<p><b>S-6 BIG BOX RETAIL</b> Sector of large retail stores, typically over 35,000 sq. ft. offering wide choice at reduced price. Also contains strip retail and fast-food and/or gas station outparcels.</p>	<p><b>General Character:</b> Traffic congestions, pedestrian unfriendly, underutilized parking lots, limited connectivity <b>Building Placement:</b> Random, parking dominates <b>Frontage Types:</b> Parking lot <b>Typical Building Height:</b> 1-storey <b>Type of Civic Space:</b> Parking lot</p>
	<p><b>S-7 BUSINESS PARK</b> Sector containing large-footprint buildings dedicated exclusively to commercial use -- class A office to warehouse.</p>	<p><b>General Character:</b> Homogenous, auto-dependent, limited connectivity, lack of relationship between building and street <b>Building Placement:</b> Random, "train-wreck" pattern <b>Frontage Types:</b> Lawn <b>Typical Building Height:</b> 1-to-multistorey <b>Type of Civic Space:</b> Lunch Cafeteria</p>
	<p><b>S-7 EDGE CITY</b> Suburbs inclusive of business parks shopping centers, hotels, apartments, and condominiums. Statistical equivalent, but not the functional equal of a city.</p>	<p><b>General Character:</b> Large arterials and highway interchanges, pedestrian unfriendly, limited connectivity, increased density/intensity <b>Building Placement:</b> Random <b>Frontage Types:</b> Parking Lot <b>Typical Building Height:</b> 1-to-multistorey <b>Type of Civic Space:</b> None</p>
	<p><b>SC SUBURBAN CAMPUS</b> Suburban superblock campuses consisting of education facilities, offices, mega-churches and other institutions. Building placement and campus design determined by parking requirements.</p>	<p><b>General Character:</b> Large arterials, auto-dependency, occasional pedestrian activity between buildings, well-landscaped <b>Building Placement:</b> Pseudo-campus, parking dominated <b>Frontage Types:</b> Lawns, parking lots <b>Typical Building Height:</b> 1-to-3-storey <b>Type of Civic Space:</b> Common Lawn, parking lot</p>

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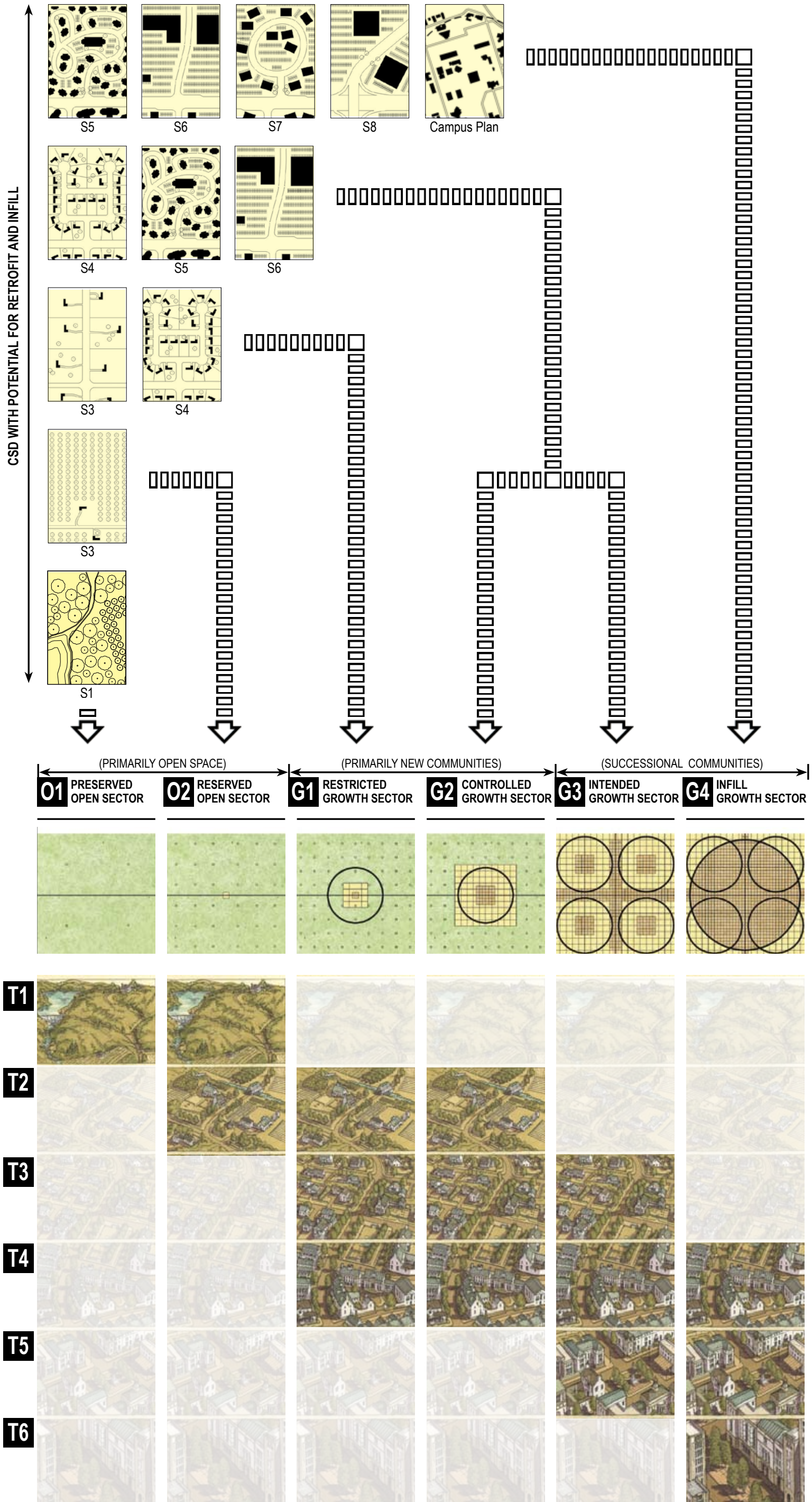
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**Transect Zone Descriptions.** This table provides descriptions of the character of each T-zone. .

	<p><b>T-1 NATURAL</b> T-1 Natural Zone consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.</p>	<p><b>General Character:</b> Natural landscape with some agricultural use <b>Building Placement:</b> Not applicable <b>Frontage Types:</b> Not applicable <b>Typical Building Height:</b> Not applicable <b>Type of Civic Space:</b> Parks, Greenways</p>
	<p><b>T-2 RURAL</b> T-2 Rural Zone consists of sparsely settled lands in open or cultivated states. These include woodland, agricultural land, grassland, and irrigable desert. Typical buildings are farmhouses, agricultural buildings, cabins, and villas.</p>	<p><b>General Character:</b> Primarily agricultural with woodland &amp; wetland and scattered buildings <b>Building Placement:</b> Variable Setbacks <b>Frontage Types:</b> Not applicable <b>Typical Building Height:</b> 1- to 2-Story <b>Type of Civic Space:</b> Parks, Greenways</p>
	<p><b>T-3 SUB-URBAN</b> T-3 Sub-Urban Zone consists of low density residential areas, adjacent to higher zones that some mixed use. Home occupations and outbuildings are allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions.</p>	<p><b>General Character:</b> Lawns, and landscaped yards surrounding detached single-family houses; pedestrians occasionally <b>Building Placement:</b> Large and variable front and side yard Setbacks <b>Frontage Types:</b> Porches, fences, naturalistic tree planting <b>Typical Building Height:</b> 1- to 2-Story with some 3-Story <b>Type of Civic Space:</b> Parks, Greenways</p>
	<p><b>T-4 GENERAL URBAN</b> T-4 General Urban Zone consists of a mixed use but primarily residential urban fabric. It may have a wide range of building types: single, sideyard, and rowhouses. Setbacks and landscaping are variable. Streets with curbs and sidewalks define medium-sized blocks.</p>	<p><b>General Character:</b> Mix of Houses, Townhouses &amp; small Apartment buildings, with scattered Commercial activity; balance between landscape and buildings; presence of pedestrians <b>Building Placement:</b> Shallow to medium front and side yard Setbacks <b>Frontage Types:</b> Porches, fences, Dooryards <b>Typical Building Height:</b> 2- to 3-Story with a few taller Mixed Use buildings <b>Type of Civic Space:</b> Squares, Greens</p>
	<p><b>T-5 URBAN CENTER</b> T-5 Urban Center Zone consists of higher density mixed use building that accommodate retail, offices, rowhouses and apartments. It has a tight network of streets, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks.</p>	<p><b>General Character:</b> Shops mixed with Townhouses, larger Apartment houses, Offices, workplace, and Civic buildings; predominantly attached buildings; trees within the public right-of-way; substantial pedestrian activity <b>Building Placement:</b> Shallow Setbacks or none; buildings oriented to street defining a street wall <b>Frontage Types:</b> Stoops, Shopfronts, Galleries <b>Typical Building Height:</b> 3- to 5-Story with some variation <b>Type of Civic Space:</b> Parks, Plazas and Squares, median landscaping</p>
	<p><b>T-6 URBAN CORE</b> T-6 Urban Core Zone consists of the highest density and height, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; streets have steady street tree planting and buildings are set close to wide sidewalks. Typically only large towns and cities have an Urban Core Zone.</p>	<p><b>General Character:</b> Medium to high-Density Mixed Use buildings, entertainment, Civic and cultural uses. Attached buildings forming a continuous street wall; trees within the public right-of-way; highest pedestrian and transit activity <b>Building Placement:</b> Shallow Setbacks or none; buildings oriented to street, defining a street wall <b>Frontage Types:</b> Stoops, Dooryards, Forecourts, Shopfronts, Galleries, and Arcades <b>Typical Building Height:</b> 4-plus Story with a few shorter buildings <b>Type of Civic Space:</b> Parks, Plazas and Squares; median landscaping</p>

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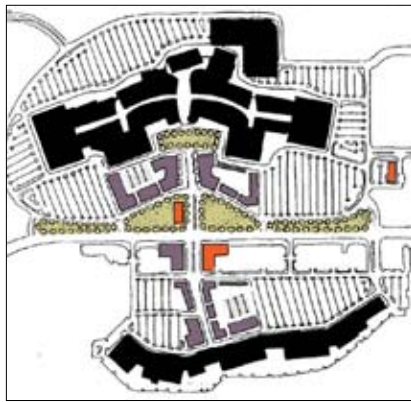
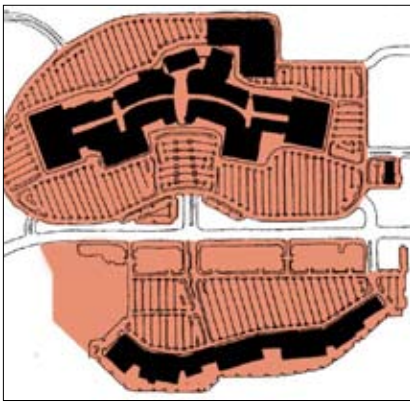
Housing Pod Transformation



Golf Course Infill



Mall/Shopping Center Transformation



Mall Conversion



Big Box Liner & Conversion



Campus Transformation



Suburban Inner City Retrofit



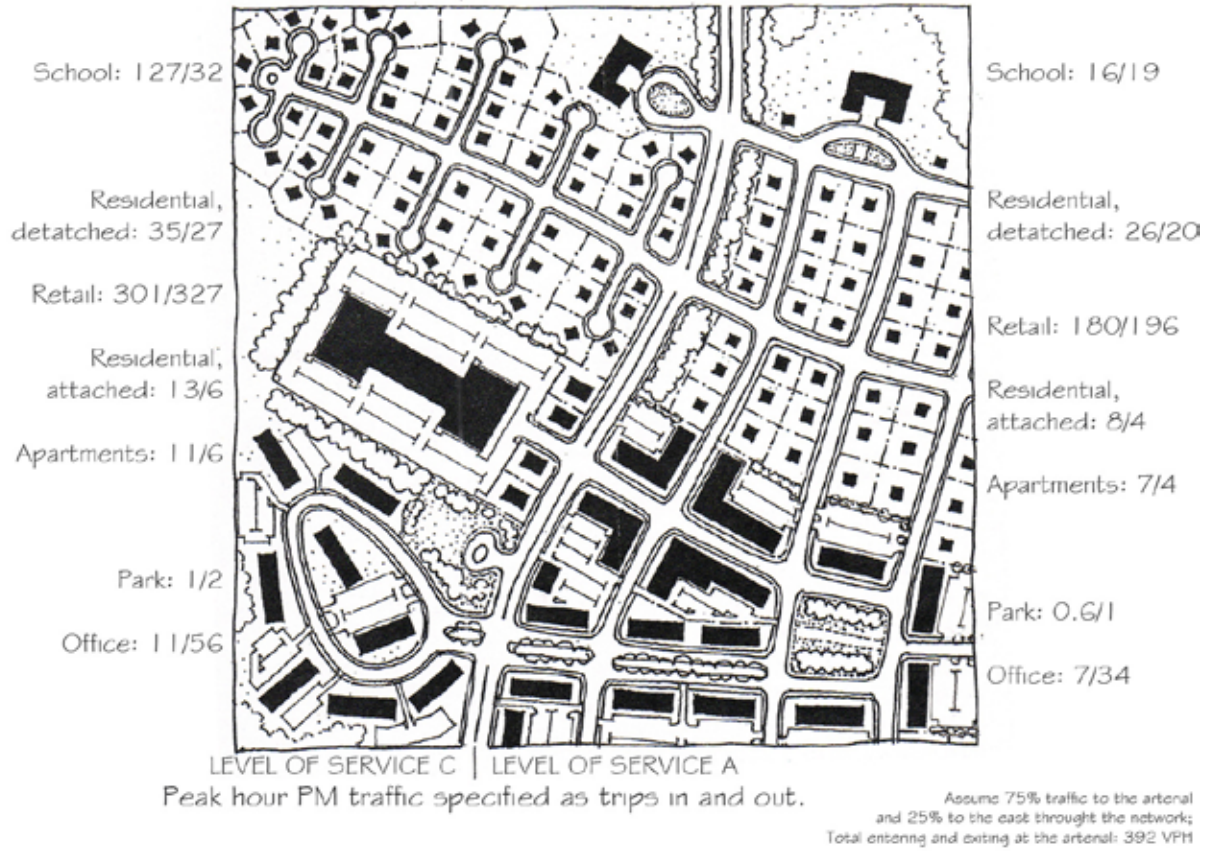
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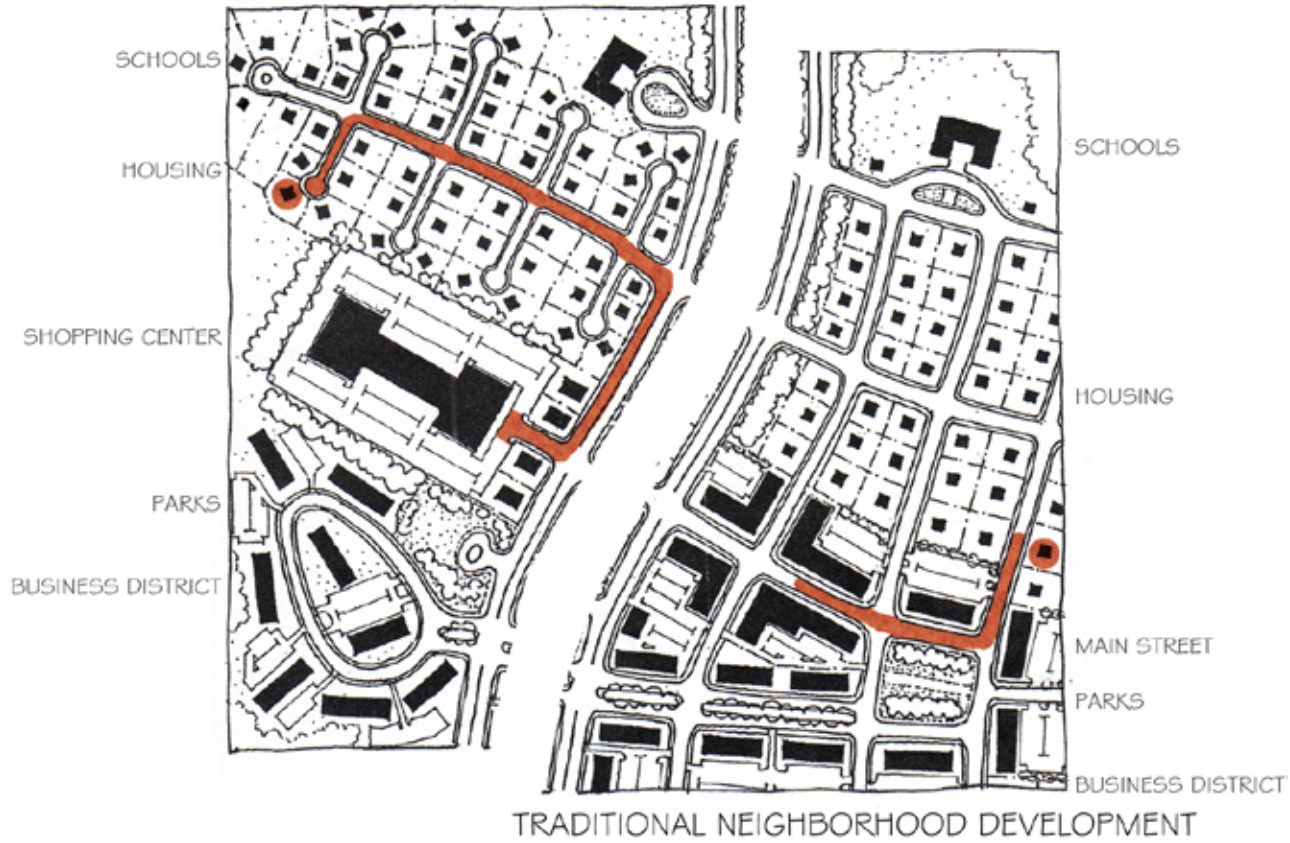
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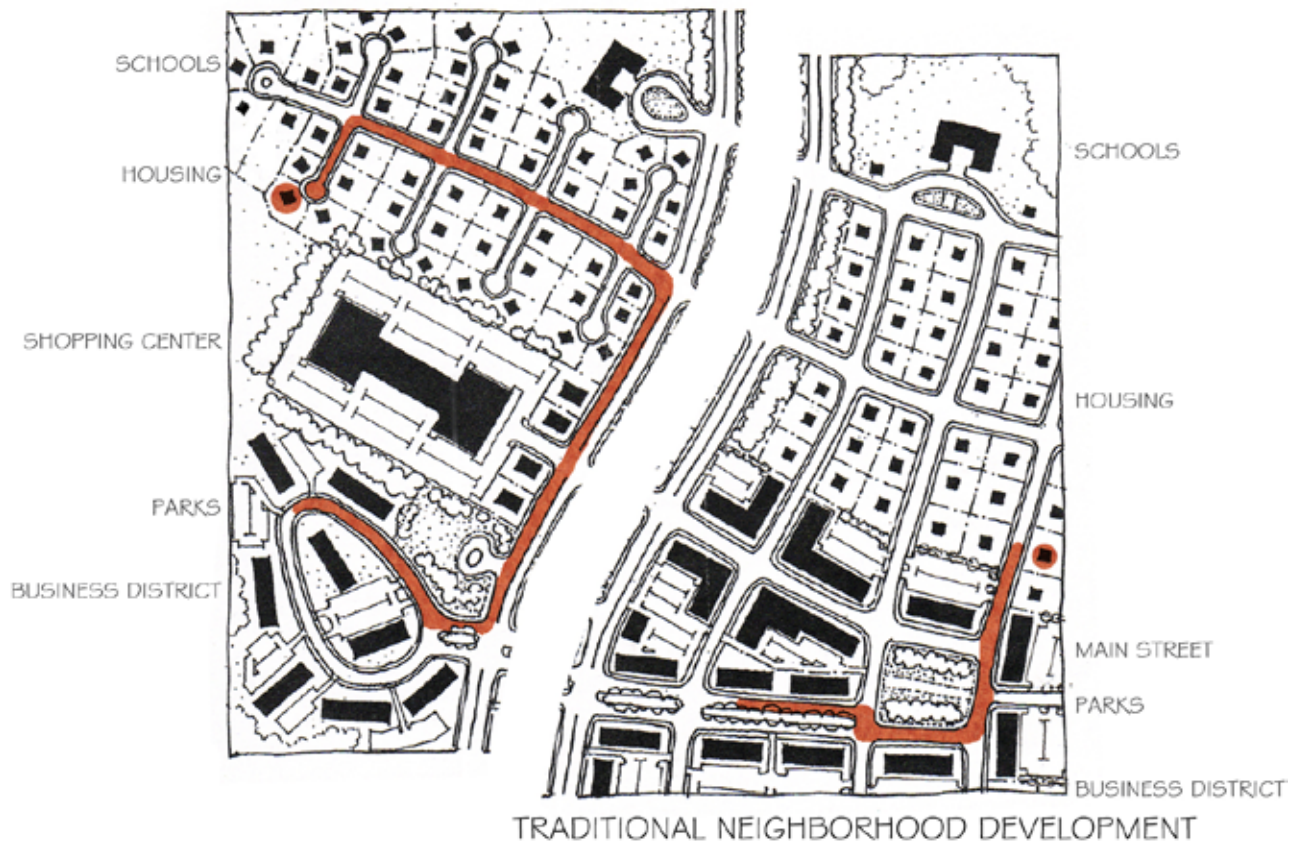
54 % REDUCTION IN TRAFFIC TO THE ARTERIAL



## CONVENTIONAL SUBURBAN DEVELOPMENT



## CONVENTIONAL SUBURBAN DEVELOPMENT



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Housing Pod



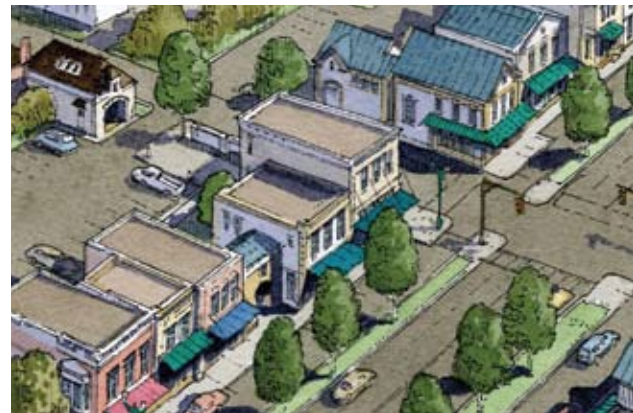
Townhouse Pod



Highrise Waterfront



Retail Development



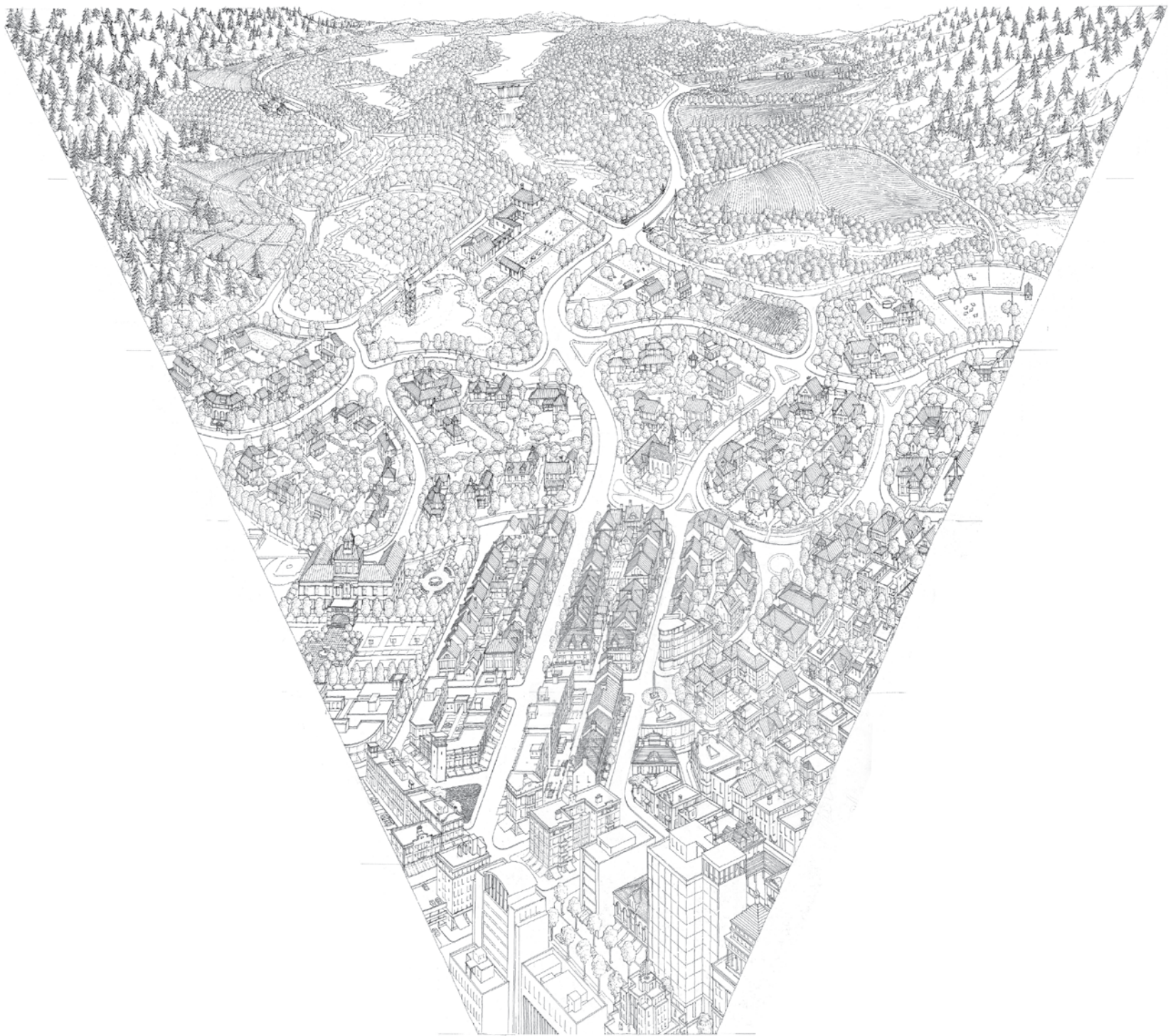
Service Station





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