

Sustainability of Suburban Retailing: Commercial Nodes and Ribbons in the Twenty-First Century

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The Problem

Empty storefronts surrounded by vast desolate parking lots tear into the very fabric that defines the sense of (sub)urban space and place and its sustainability. Suburban shopping strips and nodes that are spread out throughout suburbia are also distinguished by the share of empty storefronts and parking lots.



The Research Question

- What are the location characteristics of “durable” commercial nodes and strips that endured the down national and regional market economy, which started in US in 2007?
- If previous studies have shown that housing in locations with multimodal accessibility options and proximity to urban centers with mixed use fared better even in recessionary periods compared to those without such features, then we are aiming to determine if the same can be stated with regard to commercial centers and strips.

The Sustainable Retailing Hypothesis

- Located in planned or emerged “naturally” in urban nodes (commonly major or minor arterial road intersections) and strips (primary or secondary arterials)
- The node is mixed land use, with commercial, office, civic uses
- Maintains a “close” proximity to housing
- Provides multimodal access (walking, biking, transit, car)

Research Method:

“Mapping” Proximity, Accessibility, Land Use Mix, and Retail Viability

- Part I--Initial mapping of the built form of shopping centers and strips with online aerial maps and site visits will be combined with statistical analysis of the features (part II) by commonly used “match paired” real estate appraisal and regression techniques, aided with a geographical information system (GIS).
- Part II--Match-paired and regression methods use a sample of shopping centers and strips with attribute and spatial data (occupancy rate, or rate per total shopping area as an indicator of viability) that are proximate to housing and mixed-use urban centers (from 1/4 mile to one mile) with similar centers and strips in suburban sprawl locations that lack the proximity feature—“control.”

Anticipated Outcome

- By rejecting (null) hypothesis that proximity to housing and activity nodes in mixed use neighborhoods with multi-modal access makes no difference to the viability (sustainability) of the shopping centers and strips, this research aims to lend further credence to a central tenet of smart growth and new urbanism, that accessibility of activity nodes—retail, office, civic—with multimodal mobility options—from walking, biking to transit ride and car—matters in urban sustainability—from neighborhood and city to the regional scale.

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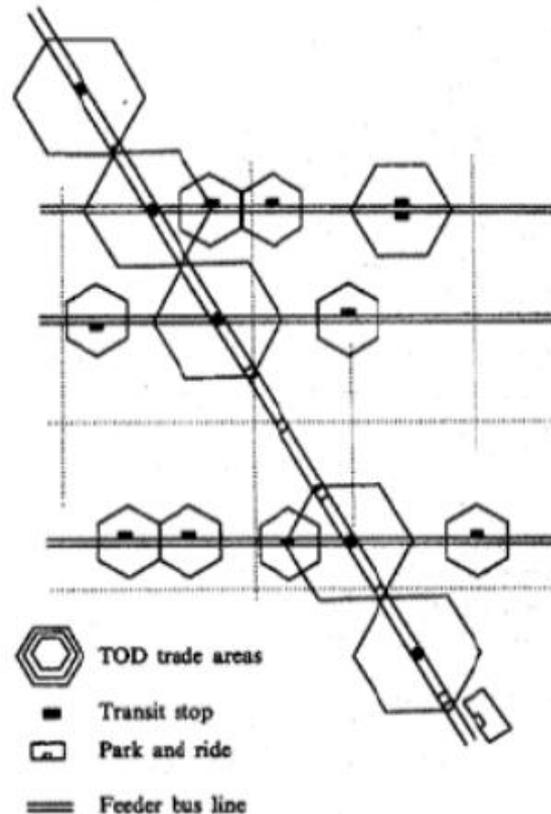
- Part I Mapping Sustainability of Retailing Built Form
 - Part II Statistical Analysis

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Mapping Sustainability of Retailing Built Form
From Regional to Community and Neighborhood Center
(Part I)

The Retailing Hierarchy

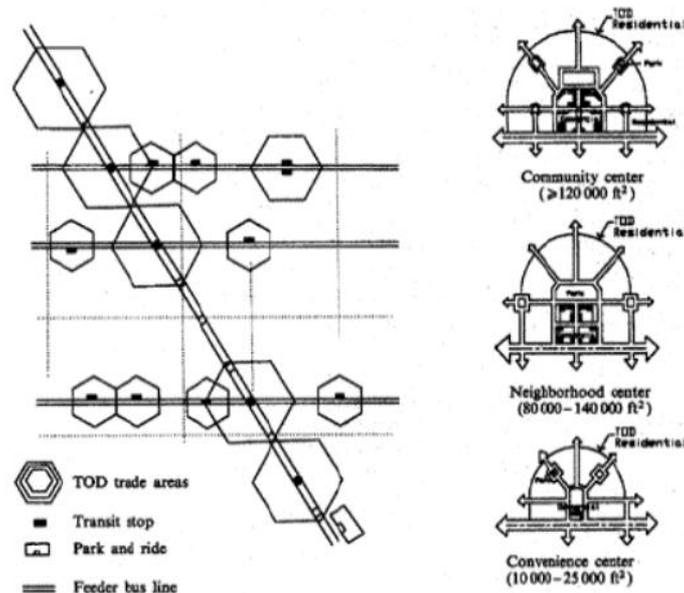
- Taxonomy of shopping activity: Regional-Community-Neighborhood-Convenience*
- Taxonomy informed by central place theory (CPT) in twentieth century
- High order, infrequent (e.g. furniture) and low order, frequent shopping (e.g. milk) in regional and convenience shopping locations distinguished by trade area range



Central place representation of retail trade areas along transit corridor (adapted from Banai 1998).

The Retailing Hierarchy and Urban Sustainability

- A durable concept in twenty-first century—TOD core areas are informed by retail location hierarchy
- Retailing hierarchy is transforming in form and function
- Suburban retailing sustainability issues at every scale— from regional to community, neighborhood and convenience shopping
- Retailing viability correlates with (sub)urban sustainability—centers are a region’s “building blocks” *(Detroit, Philadelphia)



Central place Representation , and classification of center by size and type in transit oriented development.

(adapted from Calthorpe 1993, Banai 1998)

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a. SUBURBAN SPRAWL



b. TRADITIONAL NEIGHBORHOOD

Suburban Sprawl (a) vs. Traditional Neighborhood Design (b) Source: adapted from Duany and Plater-Zyberk (1992)

Sustainability of urban form and function questioned

Suburban sprawl (a) is illustrated by single-use commercial or residential zones that are accessed by a major arterial road, such as one shown in the middle of the diagram. This subdivision pattern is also called a “pod” that correlates with car-dependent suburban sprawl. suburban retail with vacant properties resemble this urban form.

The contrast is TND (b) with its land use mix and networked streets that are shared by cars and pedestrians. Viable suburban retail centers resemble this urban form.

Atop the Retailing Hierarchy: The Unsustainable Regional (Outlet) Mall and Strip



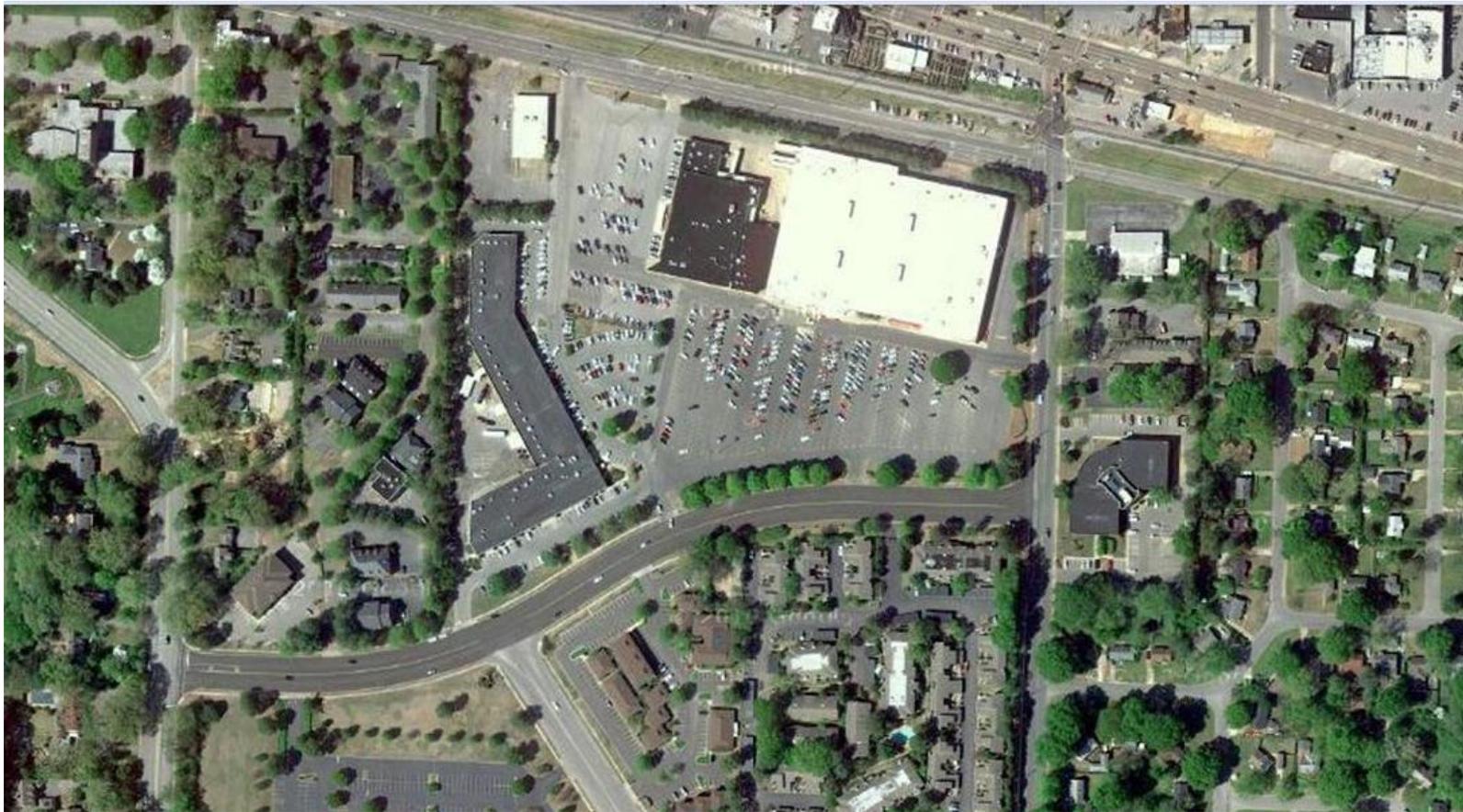
A suburban shopping center and strip in Lakeland TN is sited amid greenfields and accessed by a two-lane (Canada) road off interstate I- 40. It contains largely empty stores. Low density suburban housing in northwest direction of this mall is in close proximity but in a separate “pod” zone. This is an example of unsustainable real estate both in physical form—a high impact development with impervious building and site materials--and retail function (low occupancy rate).



A suburban shopping center and strip in Lakeland TN is surrounded by greenfield, and accessed by a two-lane (Canada) road off of interstate exit ramp (I-40). It contains largely empty stores.

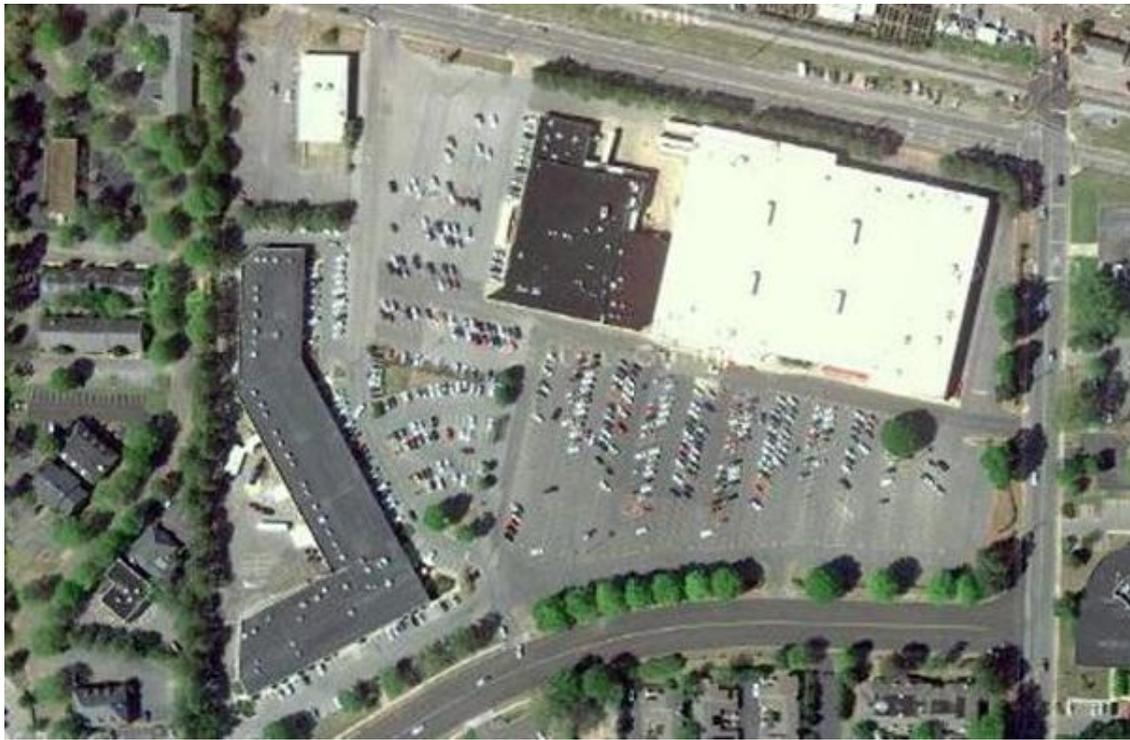


A small portion of parking area of shopping center is used (above, left). The parking area in strip mall is entirely empty (above, right).



**A Contrast: Outlet Store in Urban Center Location—
Retail Location in “Post-Hierarchy “ Phase**

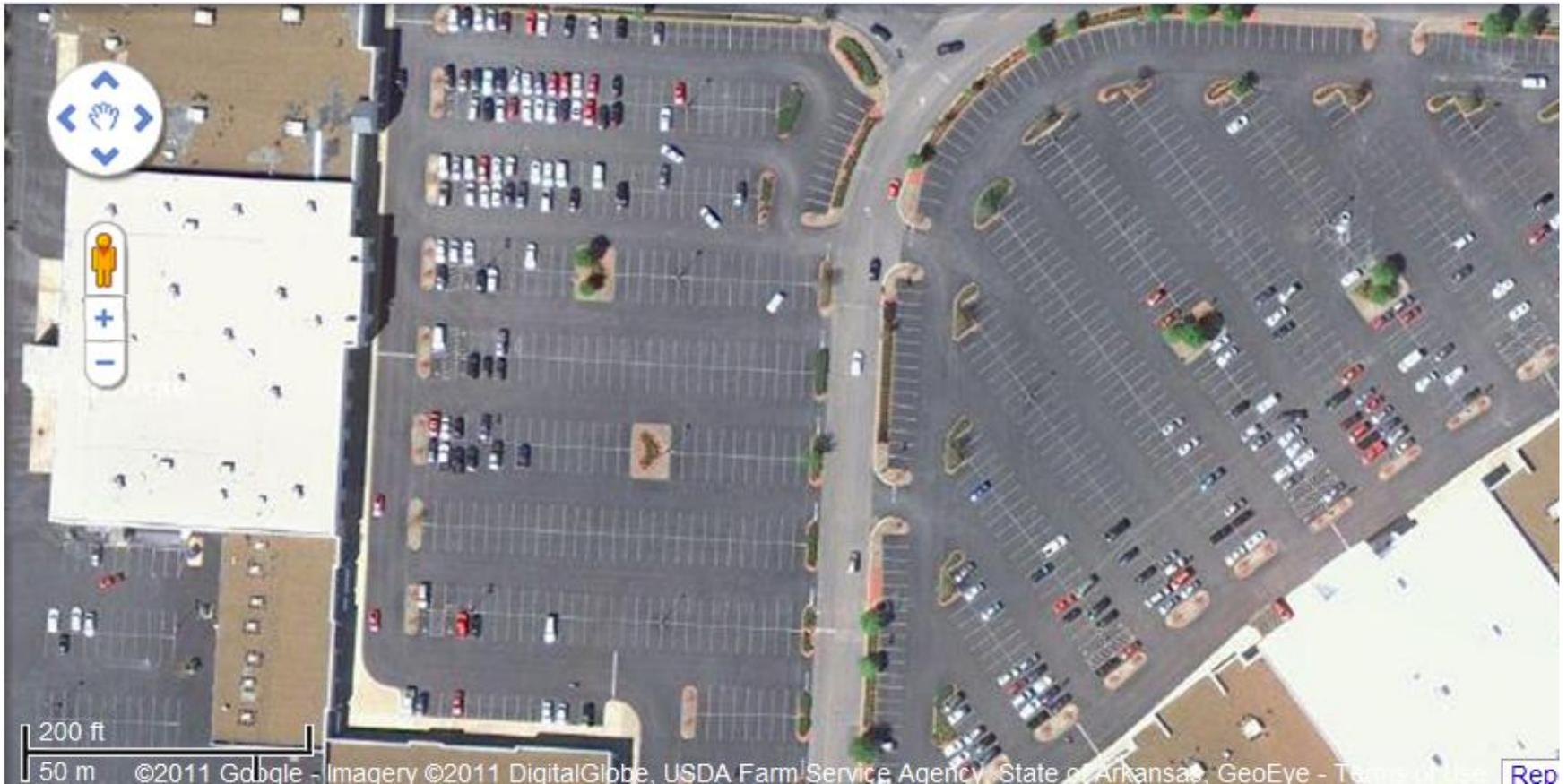
Retail node with a regional, community, and neighborhood orientation is “contained” by urban form and function of the arterial and tree-lined collector streets and mixed land use . The grocery store and department store “power center” are in same center with restaurants that contribute to its viability with diversity. This center is an example of single site location of retail chain in the metro region (Pottery Barn).



Retail Location in “Post-Hierarchy “ Phase

Retail node with a regional, community, and neighborhood orientation is contained within the urban fabric of arterial, collector roads and mixed land use

Pottery Barn closed its store in suburban regional mall but maintains an “outlet store” in this community shopping center along with William Sonoma and other chain restaurants (building in lower left) with mixed use and pedestrian scale. The center contains a grocery store as well as department store (Target) with two boxed buildings joined (upper right). The land use in proximity has a fine grain with housing, both high and low density, and offices and restaurants. The center has pedestrian-friendly scale with urban collector streets.



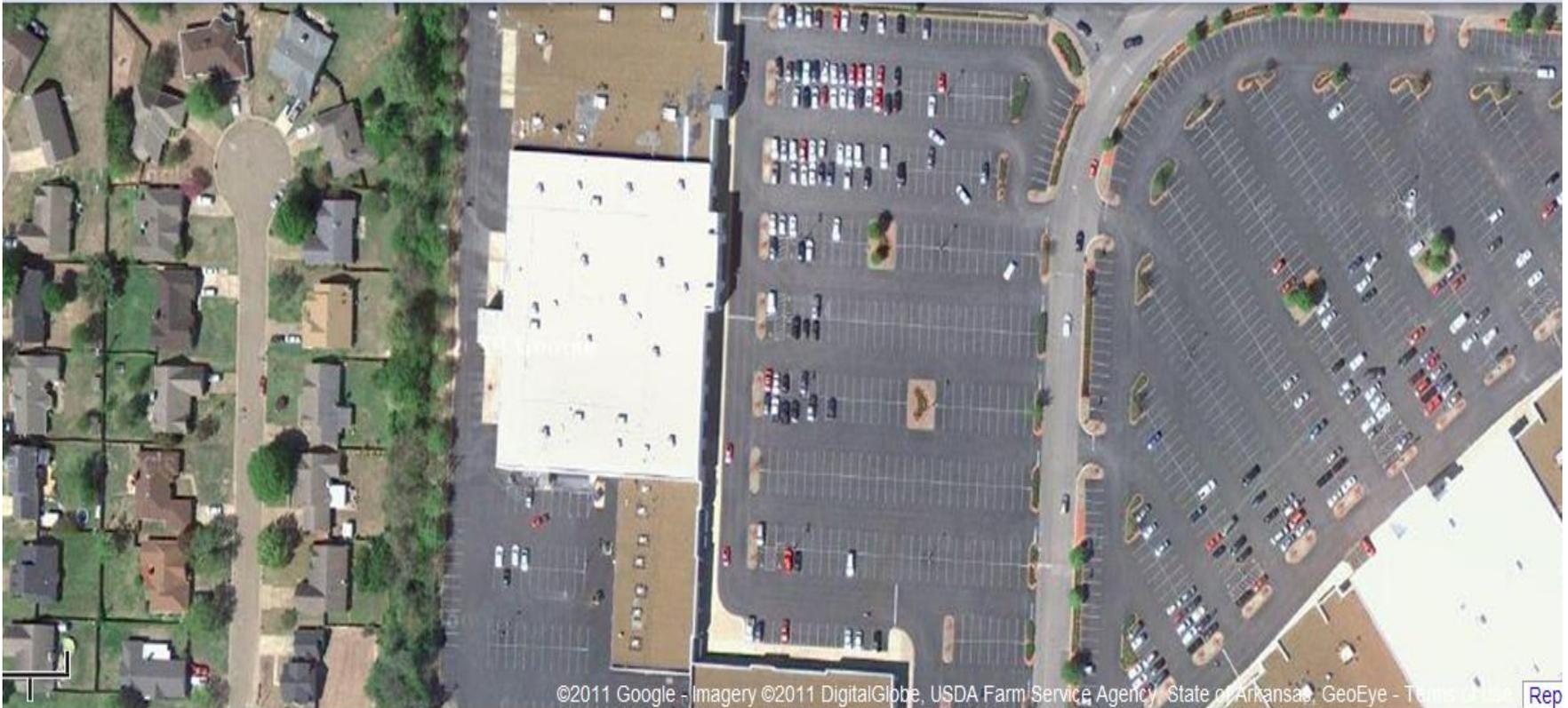
The wasted parking spaces of empty regional retail stores (overbuilt retail infrastructure)

Vacant stores in the southwest corner (in brown) are empty even when anchored by larger regional retail (furniture) and fabric chain stores. This is likely a symptom of retail space “overkill.” Compare retail space (per capita) in this region with the amount supplied in sustainable metropolitan regions.



Big box “power center” and road hierarchy

This big box suburban power center has a direct access within 200 feet of a major commercial corridor with a cul-de-sac-like entrance! Transit is nowhere to be found here!



Proximity without accessibility: pod effect

*The shopping center borders on a residential subdivision though without direct access!
Vast largely empty parking areas indicate overbuilt retail space.*



Power center and under utilized parking spaces

The chain department stores are in a trendy “open air” suburban regional shopping center. However, the vast middle isle of the shopping center is empty parking spaces.





The Sustainable Community and Neighborhood Center

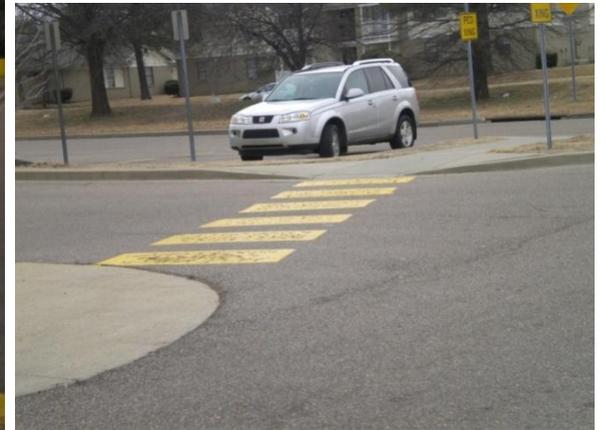
This neighborhood center in a suburban Memphis location (6520 Memphis Arlington Rd, Bartlett TN 38135) is in a planned commercial node which includes a chain grocery (Wal-Mart Neighborhood Market) a chain convenient store (Walgreen), restaurants and gas stations highlighted in red. This viable neighborhood center has a pedestrian-friendly access to predominantly single family housing surrounding the center. Main collector roads have designated bike lanes. Even though the housing lacks diversity, its proximity to the shopping center resembles new urban model of retail at a core and residential periphery.

The Sustainable Community and Neighborhood Center



Wal-Mart neighborhood markets are categorized as grocery stores, department stores, and discount stores. (source)

*This shopping center in Hickory Hill Area (2856 Hickory Hill Rd Memphis, TN 38115) similarly includes a Wal-Mart neighborhood market and others shops and offices. This center has a mixed land use and includes two restaurants. Residential neighborhoods (outlined in yellow), with and without arterial separation, are proximate to this center within a walking distance. This “unplanned” center has similar features to the planned center shown in Bartlett TN. However, foreclosure is rampant in this first-ring suburb of Memphis.**



Sustainable Community and Neighborhood Retailing

The residential and commercial areas are separated by a green buffer zone. Bike racks provide cyclist access to the store.



The pedestrian crosswalks like the one shared with drive through pharmacy are marked on the driveway indicating and directing pedestrian traffic. There is an ample amount of signage for motorists.



The side walks to the store are ADA compliant. Parking spaces abut the building front.

The Socio-Economic Landscape of Two Community and Neighborhood Centers: Number of Foreclosed Properties by Zip Code

Date*	2000	2001	2002	2003	2004	2005	2006	2007	2008
38115 Number of Foreclosures	292	260	310	322	364	385	548	634	260
38135 Number of Foreclosures	73	78	134	123	148	183	240	254	154

The land use (mix) and (multimodal) accessibility features contribute to viability of the community and neighborhood centers surveyed in spite of unfavorable economic context, particularly with increasing number of foreclosed properties (2000-2008). Further statistical analysis in part II provides validation of the effects of proximity (walkability) and mixed land use on viability of commercial center with new urbanist-like features, ceteris paribus.



***Sustainable Community and Neighborhood Retailing –
Grocery Chain Store-- in a Regional City***

This chain store in a mixed use building in Portland OR--considered as quintessential regional city-- provides an alternative to the entirely car-dependent shopping and retailing with an urban density that sustains public transit. Rail tracks are visible next to side street, with parallel parking.



Sustainable Community and Neighborhood Retailing – in the Regional City

Examples of sustainable retailing --grocery chain store in Portland OR - City. The chain store respects the urban grid in the Regional City.

More Examples of Sustainable Retailing (Department and Grocery Chain Stores) in the Regional City

Photos of the examples

- Target stores in a transit-supportive node in Miami FL, St Louis MO, Washington DC, and Safeway in Portland OR. The examples highlight alternatives to car-dependent shopping and retailing activity.

Takeaway for Sustainable Retail Decision Making

(Part I)

- Even when the subregion experiences foreclosure, proximity to housing—walkability—contributes to shopping center viability (multimodal access feature).
- Chain neighborhood scale grocery store with arterial access (visibility) fills market gap (in auto-oriented suburbs) and stabilizes (anchors) shopping center with restaurants and shops (mixed use node feature).
- Viable neighborhood shopping centers in first-ring suburbs approximate land use features of new urbanism.
- The (sub)urban center is a mixed node with multimodal access.

Takeaway for Sustainable Retail Decision Making cont.

- Overbuilt retail space, cannibalization, and relocation
- Market adjustment
- Paradigm shift in down markets—from multi- to single-site location of chain department store (e.g. Pottery Barn, K-Mart, Sears)
- Post retail hierarchy—furniture, grocery and specialty in same shopping center; or grocery and drugstore in one chain convenience store

Takeaway for Sustainable Retail Decision Making cont.

- The multi-scale of retailing: An argument for region building--from convenience and neighborhood to town and regional center
- Suburban sustainability issues in form and function at every scale
- Suburban sustainability opportunity by rezoning and rebuilding with rapidly changing retailing industry toward the Regional City*

Further Research

- Sustainability of the retail built form (spatial configuration detail)
- Further statistical analysis of effects of proximity (walkability) and mixed land use on viability of commercial center with new urbanist-like features, *ceteris paribus*. (Part II)
- Sustainability of center and strip (function in retail hierarchy and in post-hierarchical phase)
- Transformation of retail paradigm in down markets and rising energy (gas) price—from multi- to single-site store location, from brick and mortar to click and shop (market adjustment)
- Sustainability of supply chain and store location (e.g. local produce markets)

Further Research

- Sustainability of property leasing or purchase (management) structure with power centers and strips (ancillary stores)
- Recycling “unsustainable” retail space in centers (grayfields) or strips (vacant stores along suburban arterials) with mixed land use and multimodal access (with ride and bike along arterials)
- The common features of retailing in the Regional City—from convenience store to the power center--best practice cases in sustainability of retailing

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