

Transit-Oriented Development Opportunities Among Failing Malls

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A White Paper from the National Center for
Sustainable Transportation

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EXECUTIVE SUMMARY

This paper explores opportunities for the redevelopment of failing regional shopping malls as Transit-Oriented Developments (TODs) to improve transit ridership, focusing on Southern California. In effect, the study suggests an alternative to the typical sequence of first providing transit infrastructure and then changing land uses and densities to develop a TOD around new transit stations. Instead, the study suggests that failing shopping malls can provide the footprint for their redevelopment as TODs that could then be linked to transit lines. The study focuses on several major topics and reviews recent literature on the following steps in the argument for this policy:

1. The rationale for redeveloping declining malls as TODs, the supporting federal and California policies for TODs, and evidence for how different characteristics of TODs and their combination can reduce vehicle miles traveled, air pollution, and greenhouse gas emissions;
2. The issues that hinder the development of TODs around transit stations, e.g., difficulties in up-zoning, land assembly; loss of existing affordable housing;
3. Changes in retail, focusing on factors affecting the closing of shopping malls, e.g., the effect of Internet shopping on shopping malls, and the increasing failure of shopping malls; and
4. The potential and rationale for the redevelopment of failing regional malls into TODs.

In conclusion, the paper identifies follow-up studies to test the viability of the approach, including:

- a. identifying failing malls in specific metropolitan regions;
- b. analyses of potential sites as transit markets—including studies of the density of the development around failing malls, population characteristics, current level of transit service, etc.;
- c. studying the feasibility of providing different types of transit stations adjacent to the identified redevelopment sites;
- d. the development of a model (s) of how such malls could be redeveloped, including the steps to achieve TOD objectives, and, especially, modeling the types of housing, the number of housing units, as well as different mixes of affordable and market rate housing that such TODs could contain at different height and bulk standards, alternative retail and housing mixes, as well as different parking restrictions; and

- e. proto-types of public-private partnerships (Friedman 2016) that could be used in the redevelopment process, for example, in the case of California, examining the feasibility of raising revenue with California's scaled back tax increment financing, and potential rezoning and affordable housing scenarios. Such studies would also require an understanding of different lender-owner arrangements in the failing malls, and the feasibility of redevelopment and public private partnerships under different shopping mall lender-owner arrangements.

1. Introduction

The major objectives of transit investments, especially in areas with heavy traffic, are to improve mobility for all, to reduce traffic and vehicle miles traveled (VMT), and reduce air pollution through more use of transit options. However, in many areas where major transit investment has occurred, such as in the Los Angeles Metro region—the focus of this study¹—the increase in transit ridership and reductions in VMT have been modest (Houston et al., 2015). Moreover, recent research documents that, in the LA Metro region, despite substantial transit investment, overall transit ridership has decreased since 2007 (Manville et al., 2018a). Experts agree, however, that transit provision is not sufficient to accomplish intended goals. Other linked conditions, which are characterized as elements of Transit-Oriented Development (TOD)², are widely recognized as necessary for achieving the intended goals. Regional transit agencies, such as Los Angeles METRO, often subscribe to a TOD strategy, and promote efforts to increase existing densities and improve other built environment conditions through changes in zoning and redevelopment around new stations. The first part of this paper focuses on the evidence we have on how different aspects of TODs affect VMT.

Changing existing neighborhoods to become more transit oriented can face community opposition and other problems. However, without higher densities within a walking area or a TOD that can support transit, transit is not efficient. In the U.S., transit agencies, in their plans to site new facilities outside densely populated cities, such as NYC, often face siting their transit lines and stations in areas already developed at lower densities than optimum for efficient transit. Ideally, transit-oriented development should occur in tandem with new transit investments. However, this seldom occurs, and the expectation is that the areas served by new transit will be rezoned and redeveloped to higher densities to achieve the goals of reductions in VMT, and higher transit ridership. Transforming an established area surrounding a station or a stop on rapid transit into a TOD is a major challenge for efficient transit. Redeveloping an already developed area for higher density can be expensive, subject to community opposition and delays. The second part of this paper reviews the challenges in establishing a TOD.

Recently, retail trends, i.e., the closing of anchor stores, such as Macy's or Sears, and increasing shopping mall failures are receiving much public attention. The impacts of Amazon and online retail on brick and mortar retail is a major reason for these changes. According to industry experts (Credit Suisse 2018; Cushman and Wakefield 2018; Bainbridge 2014), in the near future, we can expect major changes or increases in the failure of many shopping malls where such anchors are closing. Shopping centers range in size and character from neighborhood-oriented and strip convenience centers taking up to 5 acres to super-regional malls with 60-acre

¹ This study grounds the argument presented in this paper in the Southern California experience. The failure of shopping malls, however, is a national phenomenon, and the argument developed here for their redevelopment is a general argument, which could be applicable to other metropolitan regions.

² Transit-Oriented-Development refers to a set of land use/built environment characteristics associated with higher levels of transit use and lower levels of vehicle miles traveled (Calthorpe 1993; Bernick and Cervero 1996; Cervero and Kockelman 1997).

footprints or more and several anchor stores (ICSC 2017). The third part of this paper reviews retail trends, focusing on regional malls, and the increasing recognition by the industry that failing malls provide opportunities for mixed use redevelopment.

Failing regional malls with their large urban or suburban footprints of 40 acres or more, can provide an adequate nucleus for a TOD. Local governments in urban areas can passively accept changing retail trends, with periods of deterioration, eventual changes and uneven outcomes, or seize opportunities to reshape large patches of the urban landscape to become more sustainable and address deficits in transit-oriented development and affordable housing. The fourth part of the paper makes the case for redeveloping failing regional malls as TOD sites that can be linked to transit lines. The concluding section identifies follow-up studies to explore this opportunity.

In summary, this paper first discusses the rationale for redeveloping declining malls as TODs, federal and California policies on TODs, and the evidence for how various characteristics of TODs affect vehicle miles traveled, and resultant air pollution and greenhouse gas emissions. It then goes on to discuss the impediments to developing TODs. The next section summarizes the outlook on shopping malls, identifying types of shopping malls, the industry outlook on different types of shopping malls, and redevelopment opportunities. This is followed by a discussion of the advantages and disadvantages of redeveloping declining shopping malls as TODs. The conclusion identifies next steps to test the viability of this proposal.

2. Redeveloping Declining Malls as TODs: Rationale, Policies, and Evidence

In a growing economy, declining malls, with their large urban or suburban footprints, will be redeveloped over time. Why should public policy promote TODs as a redevelopment strategy for declining malls? There are several major reasons: their existing or potential transit access; and their large footprints with their potential for thousands of new housing units and for higher density development. TODs are also supported by federal policies, and, in California, by strong state policies. In addition, there are a multitude of studies that provide evidence on the impact of different aspects of TODs on the reduction of vehicle miles traveled (VMT) and resultant effects on air pollution, and greenhouse gas emissions. This section provides an initial rationale for redeveloping declining malls as TODs, discusses federal and state policies on TODs, and summarizes the findings of studies on the impact of TOD features on VMT.

2.1. Rationale for Redeveloping Declining Malls as TODs

Most malls are already served by bus transit. Failing malls redeveloped as higher density mixed use developments could be provided with higher quality bus service, including bus service to more regional employment centers and more frequent service, and some locations could be upgraded to Bus Rapid Transit (BRT). In parts of California, especially the Los Angeles metropolitan area, where transit investment has been substantial, and will continue for the

next few decades³, the extension of light rail lines to redeveloped malls is feasible over the next forty years.

An important objection to the redevelopment of declining malls as TODs is that many malls in the Los Angeles metropolitan region, as well as throughout the country are located in suburban rather than urban areas. If these areas were to retain their suburban densities, extending transit to such locations may not be efficient. However, many suburban areas around the country are densifying, making transit extensions to malls redeveloped as TODs feasible. For example, the Southern California Association of Governments (SCAG) region serves not only Los Angeles County, but also, Orange, Riverside and San Bernardino counties (as well as Imperial County), which are suburban counties. In its 2012–2035 SB 375 Sustainable Communities Strategy, SCAG projected that over 50% of new housing and employment growth in its region could be accommodated in more compact, mixed use developments in high quality transit accessible areas (SCAG 2012).

In addition, regional malls, typically 40–100 acres, while retaining a portion of commercial development can accommodate over a thousand apartment units. For example, the Westfield Promenade is a 34-acre mall located in the Woodland Hills district of Los Angeles which closed in 2017. Westfield Promenade 2035 is a plan for its redevelopment into a mixed-use center. In addition to substantial commercial development, it has plans for 1,400 apartment units in its redevelopment (Westfield Promenade 2018).

2.2. Policies Supporting TODs

This section reviews federal and state transit policies in support of TODs, and the evidence available on the effect of different aspects of TODs on vehicle miles traveled (VMT).

Transit Oriented Development strategies have been supported by the Federal Transit Administration through SAFETEA-LU (2005), which made TODs eligible for federal funding, and MAP-21 (2012), which created a Center for TOD to develop guidance for states and local governments, and a Pilot Program for TOD Planning. The latest FTA authorization bill, FAST (FY 2016–2020) continues the TOD Pilot program (U.S. DOT-FTA 2018 a,b).

In addition to FTA support for TODs, since the late-2000s, California's climate change policies have offered further support for this policy. SB 375, the Sustainable Communities and Climate Protection Act of 2008 is a key legislation among California's policies to reduce GHG emissions (California Air Resources Board 2018a). It followed California's 2006 Global Warming Solutions Act (A.B. 32) which originally committed the State to reduce emissions to 1990 levels by 2020, and 80% below 1990 emissions levels by 2050 (CARB 2018b). Because the transportation sector was the economic sector with the largest percentage(39%) of GHG emissions in California, in 2015 (CARB 2017), the State, under A.B. 32, developed a set of programs aimed at reducing

³ Measure M passed in November 2016 has targeted over \$40B in transit construction over the next four decades. (METRO 2018)

carbon emissions from fuels sold, changing vehicle standards for new cars to reduce tailpipe CO2 emissions, a Renewables Portfolio Standard requiring utilities to increasingly incorporate renewable energy sources in their portfolios, the cap-and-trade program requiring utilities to cap their emissions at increasingly stricter standards and which established a market for trading allowances with other companies, as well as targets and incentives for Zero Emissions Vehicles (ZEVs).

SB 375, the Sustainable Communities and Climate Protection Act of 2008 is aimed at the characteristics of the urban environment, and sustainable communities are identified as a mix of Smart Growth/Compact Communities/Transit-Oriented strategies that include higher density, land use mix, network connectivity of streets, transit access, and regional accessibility to jobs and housing. The goal of SB 375 is to reduce GHG emissions by reducing vehicle miles traveled (VMT), since vehicle travel is the primary mode of travel in California. Thus, California's regional transportation agencies, more than in other parts of the country, both from the side of financial federal and state incentives, and from regional planning requirements, have pursued TOD strategies in their transit plans over the past decade and produced guidelines for local governments such as Los Angeles or Sacramento (Center for Transit-Oriented Development 2010; Sacramento Regional Transit 2009).

Decreases in VMT are associated with improvements in air quality and decreases in GHG emissions. Improvements in air quality, especially in the Los Angeles metropolitan region is important, given that the region continues to exceed air quality standards. Despite tremendous improvement in air quality over the last decades, the Los Angeles–Long Beach region still ranked as the #1 region in the country for ozone pollution, and #4 for PM 2.5 pollution (American Lung Association 2018). And, as discussed above, California, through its climate change legislation, has a statutory commitment to reduce GHG emissions. The importance of the connections among transit access and TOD characteristics to reduce VMT and thereby GHG emissions was also recognized by the United Nations International Panel on Climate Change Fifth Assessment (Seto et al., 2015).

2.3. Evidence on the Impact of TOD Strategies on VMT

Several meta-analyses or syntheses of research providing evidence of the effect of built environment characteristics, such as density, land use mix, street connectivity, etc. on VMT, have demonstrated that increasing these features decrease VMT (Transportation Research Council and National Research Council 2009; Ewing and Cervero 2010; Salon et al., 2012; Ewing et al., 2015; Stevens 2017; Ewing and Cervero 2017). See Table 1 for a summary of the elasticities for these features indicated by two major studies, also included is the TRC/NRC elasticity for population density.

Table 1. Comparison of 2 Major Studies on the Effects of Urban Form Strategies on VMT

Urban Form Strategies	Impacts of Strategies on VMT in terms of Elasticities*		
	TRC AND NRC (2009) Driving and the Built Environment	Ewing and Cervero (2010) Meta-analysis	Stevens (2017) Meta-regression (First number controls for self-selection/second does not)
Density	-.05 to -.12	-0.04	-0.22/-0.10
Mixed Uses (Diversity)		-0.09	0.11/-0.03
Intersection/street density (Design)		-0.12	-0.14
Job Accessibility by auto (Destination Accessibility)		-0.20	-0.20
Job Accessibility by transit (Destination Accessibility)		-0.05	0.00
Distance to Transit		-0.05	-0.05

*Elasticity is a measure of the change in a variable to the associated change in VMT. For example, if the elasticity is -0.04, as the density is increased 100% or doubled, VMT would decrease by 4%.

The major striking difference between Ewing and Cervero's meta-analysis and Stevens more recent meta-regression is that for mixed uses. In this case, Stevens reports a positive elasticity, +0.11 for studies controlling for self-selection, meaning that as you increase a mix of uses, driving increases. However, only 2 studies out of 15 in his study control for selection, although the results are intriguing. Stevens' study also reports a greater negative elasticity for increasing density than Ewing and Cervero. In general, the syntheses find modest negative elasticities between different aspects of the built environment and driving.

Note that the TRC/NRC study (2009) was primarily focused on density and conducted its own research synthesis (Brownstone and Golob 2009). It concluded that doubling density could reduce VMT from 5–12% (TRC/NRC 2009, 68–75). The TRC/NRC study recognized that although the elasticities reported for the effect of density on VMT were small, combined with other built environment measures, changes in VMT could decrease by 25% or more.

The TRC/NRC study developed two development scenarios—one doubling the density of 25% of new residential development, and the other doubling the density of 75% of new residential development, and found reductions of GHG ranging from 1 percent to 11 percent. Note that TRC/NRC used 1990s average densities for new development, which averaged 1–2 dwelling units per acre. However, guidelines for effective light rail transit station catchment areas are typically higher than 4 dwelling units per acre. For example, a recent guideline published by the

Federal Transit Administration (Santasieri 2014) for light rail station center planning recommends average densities of 35 dwelling units per acre and 100–150 employees per acre. And the Puget Sound Regional Council identifies 16–67 + residents per gross acre or 15–20 residential units per gross acre as guidelines for light rail TODs (PSRC 2015).

This highlights the challenge of attaining necessary goals, such as significant reductions in VMT and GHG emissions, as well as cost-effective transit. Since 2009, residential densities for new development in the U.S. have undergone substantive increases, but the average dwelling units per acre in completed single family houses was still 6–7 dwelling units per acre in 2017 (U.S. Census 2018), far short of many TOD guidelines.

On the other hand, although the research syntheses find a small elasticity between proximity to transit and VMT (-0.05), there is evidence that residents in close proximity to rail transit are more likely to ride rail transit and have lower VMT than those outside of transit sheds. Haas found that neighborhoods near fixed rail in both urban and suburban areas of the Chicago metropolitan area had lower VMT than neighborhoods lacking rail in similar contexts (Haas, 2010). Bento et al., found lower probabilities for commuting to work by car in relation to rail mileage across 114 cities (Bento et al, 2005). Boarnet et al., found that introducing new rail service in Los Angeles did change travel behavior towards riding rail and away from driving, with a small reduction in VMT (Boarnet et al., 2017). Houston et al., compared several rail-adjacent neighborhoods in Los Angeles and found lower VMT and higher transit and walking trip numbers than the metropolitan averages, but the effects were not as pronounced as in the Chicago study (Houston et al., 2015). Salon et al., found that factors affecting transit service (fares, frequency, service hours, and service miles) are estimated to have a small effect on VMT across several studies, with proximity to rail transit having a more pronounced effect on VMT (Salon et al., 2012). As with the studies mentioned previously, the sources for these data may not control for all factors, introducing some uncertainty to claims about the effects of transit investment on VMT reductions.

Beyond the focus on specific aspects of TODs, and their impacts on VMT, a growing number of studies examine the behavior of TOD residents and provide evidence that TOD residents are more likely to travel by transit than those who live in non-TODs. In a study examining TODs in California metro areas (Los Angeles, Bay Area, Sacramento, and San Diego), Lund et al., found that residents of TODs use transit for over a quarter of their commute trips on average, nearly five times higher than the average transit mode share for the entire metro area (Lund et al., 2004). Similar studies of TODs across the nation find that TOD residents tend to have fewer vehicle trips and higher transit trips than the metro area averages (Chatman, 2013; Tian et al., 2016; Ewing et al., 2017). Although these findings are promising, the literature is highly dependent on case studies, meaning a smaller sample size. Additionally, not all of these studies fully separate whether the effects of TOD are from being adjacent to rail, from mixed uses, or from density, which may all be affecting the travel behavior of TOD residents. Residents of TODs may also self-select, meaning that while this development may make it easier to pursue a less car-dependent lifestyle, these people may have otherwise had similar travel behavior

elsewhere (Ewing et al., 2016). However, Stevens' (2017) synthesis of the research corrects for self-selection, see Table 1 above. Overall, the studies of transit ridership in TODs tend to show a higher use of transit and lower VMT than studies that focus on only one aspect of TODs.

Transit investments may reduce VMT in a TOD, especially if the surrounding community is dense, has diverse uses, and other desirable built environment characteristics, but they may not reduce VMT region-wide or increase transit use. The latter is the finding from a recent study of Los Angeles metropolitan area (Manville et al., 2018a). Despite heavy investment over the past 25 years in public transportation, transit ridership peaked in the region in 1985, began declining in 2007, and began to fall consistently since 2013. As Manville et al., indicate, a few people make most of the transit trips, and they are mostly low-income and foreign-born residents, highly concentrated in a little less than 1% of the region's land area, and typically lack private vehicle access. The major explanation for the decline in transit use in the Southern California Association of Governments (SCAG) region, according to the authors, is that private vehicle access increased substantially since 2000 among the heaviest users of transit. Low-income people became less poor, learned to drive, and bought cars. The authors point out that the region's built environment facilitates driving, especially by providing free parking at the origin and destination of most trips, which makes driving relatively easy when compared to transit. This finding supports the argument of TOD proponents, that transit is not enough, and that a combination of TOD policies that reduce driving and increase transit use is essential.

3. Impediments to the Development of TODs

If TODs magnify the impact on VMT of transit investments, what are the impediments to their development?

TODs do not necessarily evolve without other policy efforts, and without such efforts, desirable changes, such as increased residential or employment densities, may be delayed or not occur. This is a major conclusion of Schuetz et al.(2016b) study of the changes in land use around new transit stations in Los Angeles. In their case studies of development in 6 light rail station areas, the authors find that three of these stations with TOD-friendly zoning, moderately dense existing development, strong real estate markets, and active local government efforts experienced increases in housing and commercial space within a half-mile radius. The other three station areas studies experienced little changes in development, and in two of these, incompatible zoning and/or conflicting plans constrained new denser development.

Zoning is an important element in the development of TODs. In new station areas, especially in low density owner-occupied residential areas, cities need to change low-density zones to higher densities in order for a TOD to develop. Changes in zoning, however, could lead to opposition to such changes from existing property owners. Such opposition, often characterized as the NIMBY (Not In My Back Yard) syndrome, can delay or stop a city's efforts to increase residential densities, or change zoning to permit mixed uses.

Even when a neighborhood is not solidly opposed to such rezoning, the zoning change process can take several years since studies and community outreach need to be conducted. In many cases, local governments lack the funding for such planning and community outreach. In order to address this issue and ensure planning and an adequate community process in the redevelopment around new transit stations, since 2011, LA Metro has been awarding funds periodically, on a competitive basis, for cities to conduct such planning. Most recently, Metro, in its funding of planning grants for this purpose has included funding for cities to explore the feasibility of forming tax increment finance (TIF) districts (LA Metro 2018).⁴

Land assembly is another impediment to redeveloping an area into a TOD. In primarily low-density residential areas, even if an area is up-zoned, assembling several adjacent parcels for higher density development can be difficult. Often property owners may hold out for higher sale prices (Shoup 2008).

Parking regulations, both the requirements for housing developments to provide parking on site, and on-street parking provisions encourage vehicle ownership and use, and undermine the purposes of TODs. As Manville et al., (2013; 2018b) point out, when cities fail to increase street parking rates and require developments to provide parking in TOD areas, they are, in effect, encouraging automobile travel.

Redeveloping a station area site to higher densities and/or mixed use can result in the loss of affordable housing units through the demolition of such units in order to build at increased densities, or from increasing rents due to surrounding redevelopment. And unless cities take proactive steps to ensure the location of new affordable housing units in a TOD, since research indicates that land in a TOD appears to be more expensive than land outside (Boarnet et al., 2017, 10–11; Addison et al., 2012; Bowes and Ihlandfeldt, 2001), new development in TODs will tend to be less affordable. Such problems require active steps on the part of a city and the transit agency to ensure that as TOD areas redevelop and densify, that affordable housing in such areas sustain no net loss, have positive gains and that TODs develop as mixed income neighborhoods (Chapple et al., 2007; Boarnet et al., 2017).

Ensuring new housing around transit stations and appropriate shares of affordable housing is extremely important in California, especially in Southern California, given the State's housing crisis. The Los Angeles metropolitan region has one of the greatest housing deficits in the nation, where the absolute deficit of rental units affordable and available to low income renters exceeded 500,000 in the region in 2016 (Harvard Joint Center for Housing Studies (JCHS) 2017, 28). With housing affordability one of the lowest in the country, the supply of rental housing is

⁴ In 2011, California abolished local government's redevelopment powers, including the major financial instrument for redevelopment, tax increment finance. In 2015, two new bills brought back scaled down versions of tax increment financing (SB 628/AB 313)—Enhanced Infrastructure Financing Districts (EIFDs), which exclude school property taxes (making up 45% of all property taxes) in the calculation of the increment; and of redevelopment agencies (AB 2/AB 2492)—Community Revitalization and Investment Authorities, which can be formed by a city, county or JPA, and which have a requirement of 25% affordable housing set-aside (California Association for Local Economic Development 2017).

a good indicator of the tight housing supply. The vacancy rate for rentals in the LA metropolitan area was 2.9%, the lowest rate in a metropolitan area in 2016 (U.S. Census 2017). As a result of these deficits, the City of LA passed a local initiative in 2016, Measure JJJ, which set affordable housing mandates for transit oriented residential projects that require zoning changes or amendments to the City's general plan (Los Angeles Dept. of City Planning 2017).

Many of these issues have become subjects of heated public debate with the introduction by California State Sen. Scott Wiener of Senate Bill 827 *Planning and zoning: transit-rich housing bonus* in January of 2018. The proposed bill sought to override local zoning to enable the redevelopment of areas within half-mile surrounding transit rail stations, and areas within 1/4 miles of high-quality bus corridors. The bill was intended to increase ridership, reduce VMT and GHG emissions, and, in particular, to increase housing densities to relieve the deficits in housing in most parts of California and to ensure more efficient transit. It would have granted developers with housing projects within TODs a "transit-rich housing bonus" exempting them from existing zoning, and other development regulations and enabled developers to construct buildings up to 8 stories in train station areas. Critics objected to the height of buildings—the 8 stories that the bill would permit, regardless of existing zoning or the character of the neighborhood within a half-mile of a transit station; they objected to the likelihood that permitting such densities would demolish existing affordable housing, and that no provision in the bill required new affordable housing.

As a result of such criticisms, Sen. Wiener made a number of amendments to the bill, including provisions to ensure that new development in the TODs does not displace affordable housing developments; and that new developments include a mix of incomes. The amended bill reduced the height allowances from 8 stories to 5 in TODs around transit stations, and from 5 to 4 stories in bus sheds; and it introduced the reduction of parking requirements. Despite the changes, the bill was not passed out of committee, but the Senator promised to reintroduce the bill during the next legislative session (Dillon 2018).

4. Outlook on Shopping Malls

Shopping malls, long a fixture of suburban America, are facing serious trouble. As recently documented (O'Malley 2016; Zhang et al., 2016; Clapp 2014), Amazon and online retail are having an increasing impact on shopping malls. Younger generations value established retail brands less than baby boomers and mostly begin the shopping process online (Parment 2013). The failure of malls throughout the nation has been receiving much attention in the trade press, including frequent articles in Bloomberg News (Mulholland 2018), as well as an internet game, "The American Mall Game: An American Challenge" (Bloomberg 2018), which is described as bringing the player "to experience the horror of owning a failing retail giant" (Gilbert 2018). And Dan Bell (2018) has been documenting failing malls in his webpage, *deadmalls.com*, since 2000, with tours of dead malls available on his YouTube channel (Kurutz 2017; Folk 2018). Failing malls have become cultural icons.

4.1. Types of Shopping Centers

But shopping malls are only one type of retail establishments. The International Council of Shopping Centers conducts research and provides a classification of shopping centers. The following table includes general purpose shopping centers with relevant characteristics.

Table 2. Major types of General Purpose Shopping Centers

U.S. Shopping Center Classification and Selected Characteristics (ICSC 2017)					
Type of Shopping Center	Concept	Center Count	Average Size (sq. ft.)	Acres	# of Anchors
Super-Regional Mall	Similar to regional malls but offering more variety and assortment	620	1,255,382	60–120	3+
Regional Mall	General merchandise or fashion-oriented offerings. Typically enclosed with inward-facing stores connected by a common walkway. Parking surrounds the outside perimeter.	600	589,659	40–100	2+
Community Center ("Large Neighborhood Center")	General merchandise or convenience-oriented offerings. Wider range of apparel and other soft goods offerings than neighborhood centers. The center is usually configured in a straight line as a strip, or may be laid out in an L or U shape, depending on the site and design.	9,776	197,509	10–40	2+
Neighborhood Center	Convenience oriented	32,588	71,827	3–5	1+
Strip/ Convenience	Attached row of stores or service outlets managed as a coherent retail entity, with on-site parking usually located in front of the stores. Open canopies may connect the store fronts, but a strip center does not have enclosed walkways linking the stores. A strip center may be configured in a straight line, or have an "L" or "U" shape. A convenience center is among the smallest of the centers, whose tenants provide a narrow mix of goods and personal services to a very limited trade area.	68, 936	13,218	< 3	Anchor-less or a small convenience store anchor

Source: International Council of Shopping Centers and CoStar Realty Information, Inc., January 2017. (https://www.icsc.org/uploads/research/general/US_CENTER_CLASSIFICATION.pdf)

Although shopping centers range from neighborhood-oriented and strip convenience centers to super-regional malls, there are approximately 11,000 shopping centers⁵ from 10–120 acres with 2+ anchor stores, that can provide an adequate nucleus for a TOD.

4.2. Industry Outlook on Shopping Malls

Industry experts in their guidance to investors point out the weaknesses in the retail sector (Bainbridge 2014; Cushman and Wakefield 2018; Credit Suisse 2018) . Credit Suisse, in its January 2018 guidance concludes that the retail transformation is accelerating. They point out that the major causes are over-supply of brick and mortar space, weaker demand, and e-commerce. On the issue of oversupply, the guidance documents that: a) the U.S. has more retail square feet per capita than any developed country, including Canada, France or Germany; b) mall space from 1970–2007 leading up to the financial crisis, quadrupled, while the U.S. population grew slightly less than 50%. On the demand side, the growth in e-commerce has accelerated since 2000, growing from less than 1% in 2000, to over 9% by 2018, almost doubling in the past 5 years. On the other hand, retail sales, even substituting e-commerce for brick and mortar purchases, continue to grow. Credit Suisse analysts point out that the 9% switch of total retail spending to online spending does not explain the decline in malls. As it is, foot traffic in brick and mortar stores has been declining at an annual rate of 5–10% per year for the past few years, but only recently have sales per shopper begun to decline. Cushman and Wakefield stress that there is an ongoing shift in consumer spending patterns, many consumers have become more value-conscious, and younger generations place more importance on experiences than commodities (2018, 1).

According to Credit Suisse, not all retail will be impacted in the same way, and regional malls that represent only 15% of the total inventory of retail square footage are most vulnerable to closings. Two major reasons for the increased vulnerability of shopping malls is that they carry a disproportionate share of credit risk, and, secondly, because department store tenants are concentrated in malls.

Credit Suisse has identified department stores as a sector undergoing structural decline since 2001, declining by more than 35% since the peak. Over 1,200 department stores have closed since 2011. This number does not include 2017 and 2018 closings, but 2017 closings are expected to amount to over 400 (p.7) . Department stores occupy about half of U.S. mall space. Although, as the guidance points out, department stores contribute little rent to landlords, they are crucial to the viability of shopping malls, since they serve as attractors for the smaller stores in shopping malls by increasing foot traffic and profits for the smaller stores. To a large extent, due to this factor, the closing of anchor stores, such as Macy's, or Sears have an agglomeration impact on their malls (Benmelech et al., 2014).

⁵ These include centers classified as community centers (large neighborhood centers) from 10–40 acres in size, which amounted to 9,776 in January of 2017; 600 regional malls from 40–100 acres; and 620 super-regional malls from 60–120 acres.

Cushman and Wakefield report that there were 8,500 retail store closures in 2017, surpassing the number of closures during the Great Recession, and that 2018 closures are expected to match or exceed this number. The closings are expected in consumer electronics, apparel, department stores, media and sporting goods, all of which are located in malls or power centers. The expansion categories include dollar stores, discount grocery, off-price apparel, fast food, etc., most of which operate in neighborhood or community centers (Cushman and Wakefield, 1–2).

On the prospects of malls, both Credit Suisse (p. 8) and Cushman and Wakefield (p. 3) indicate that the best quality malls (Class A malls), especially in major markets will likely survive. Lower quality malls (rated Class B and C), on the other hand, will face more pressures, and will likely shrink or close, especially Class C malls. Credit Suisse indicates that some mall locations provide opportunities for redevelopment to an alternative use, and note that some landlords are adding non-retail uses, including apartments, hotels, offices (p. 10). The analysts see this as an increasing trend, with residential and retail as complimentary property types. Cushman and Wakefield agree and forecast that "the reinvention of dying malls as mixed-use projects will gain momentum in 2019 and beyond" (p.3).

In addition, the industry associations are increasingly advocating the mixed-use redevelopment of underperforming malls. In its *Industry Insights* series, ICSC has recently published a series of guidance and best practices on mixed-use centers conversion (Hoffman 2018, a,b; Sicola and Stapp 2018). At the end of 2017, *REIT* magazine published an article on how Real Estate Investment Trusts (a major type of credit lenders for shopping malls) are warming up to mixed use development (Tobenkin, 2017).

The recent closing of a regional mall in Los Angeles, the Westfield Promenade at Woodland Hills in Los Angeles, provides an example of how shopping mall owners are approaching the redevelopment of failing malls. The Westfield Promenade sits on a 34-acre site, was in decline and lost a number of stores over the past 10 years. It was finally closed in 2017. Westfield Corporation, its owner/operator until the corporation and all its holdings were sold in 2018⁶, has obtained approval for the rezoning of the site as a mix of housing, retail, office and sports venue from the LA City Planning Department.⁷ The redevelopment, however, will not be completed until 2035. This case illustrates the need for more quick and active redevelopment options for failing malls. See Figure 1 for a picture of the abandoned Macy's site at the closed mall in 2018.

⁶ Westfield Corporation was bought and taken over as of June 2018 by Unibail-Rodamco, one of the largest real estate companies in Europe (Cherney 2018).

⁷Information on the plan for redevelopment is available at the Westfield Promenade site, <https://promenade2035.com/index.php>

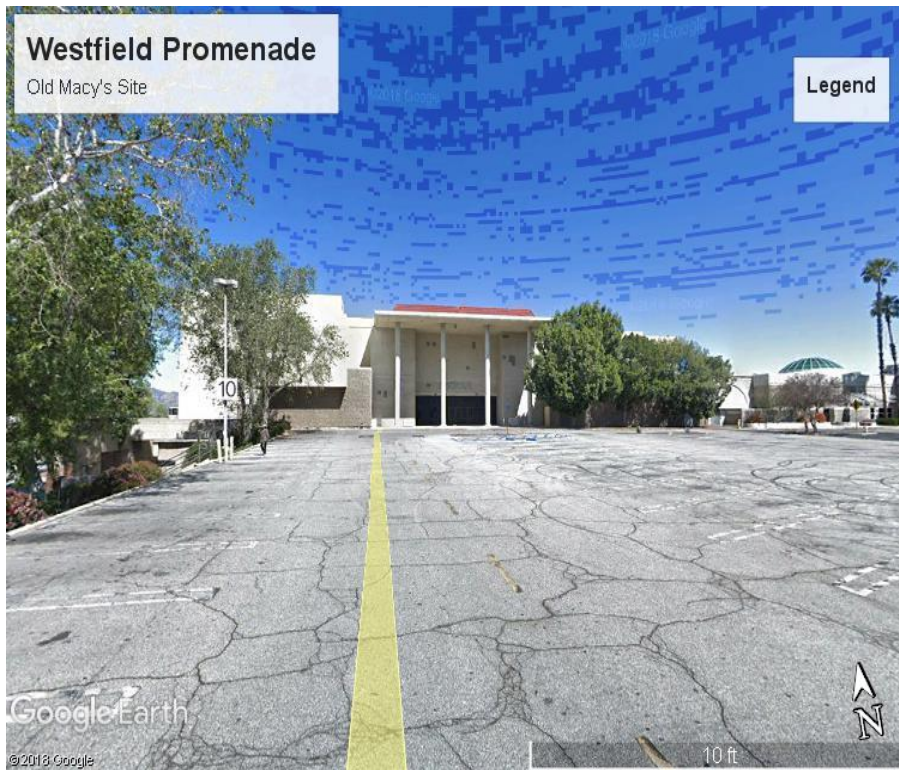


Figure 1. Abandoned Macy's site at Westfield Promenade.

Source: Google Earth, 2018

A recent report from SCAG and the Orange County Business Council (Kane et al., 2018) begins to recognize the redevelopment opportunities for failing retail in Orange County. The focus of the study is not on regional malls but on vacant and underperforming retail land parcels in the county. The study identifies such sites, as well as adjacent sites to assess the potential for site assembly to enable larger redevelopment and takes into account whether their location is within a half-mile of transit. Its methodology can be used by other local governments to identify redevelopment sites, especially to meet housing needs in the region. Of particular promise is their finding that 61% of the parcels identified are within a High-Quality Transit Area, i.e., within half-mile from a rail station or high frequency bus station. With a focus on the redevelopment of such sites, especially for housing, this study provides a good template for other counties or cities to follow to address the affordable housing challenge in California.

This section reviewed industry assessments of the trends in retail, with a special focus on regional malls. It noted the growing interest on the part of the industry on the redevelopment of malls for mixed use, and briefly described the case of a distressed regional shopping mall in the LA region with plans for a mixed-use redevelopment.

5. Redevelopment Opportunities Presented by Failing Malls

As shopping malls struggle or fail, local officials and communities have to contend with large, blighted lots. Many malls act as the economic centers of suburban communities, which carries large implications for the future livability of these towns and neighborhoods (Parlette et al., 2011). This challenge is also an opportunity for cities to transform large parcels into TODs. However, the academic literature on mall redevelopment is scarce. Research on this topic tends to be architectural case studies (Dunham-Jones et al., 2016; Southworth 2005), and several theses that present case studies (Hale 2012; Golden 2013; Riley 2009; Wilke 2006). In the late 1990s, early 2000s, the Congress for New Urbanism focused on the redevelopment of malls in suburbia into mixed use centers and coined the word 'greyfields' to refer to decaying malls in general (Bodzin 2003). The redevelopment of several decaying malls into mixed use, pedestrian oriented development, especially the redevelopment in Boca Raton's, Mizner Park (Moudon 1997), inspired much of the interest in the topic. The lack of academic papers researching how planners approach the redevelopment of failing malls is unusual considering that mall redevelopment is already underway as covered by the national press (Khouri, 2017; Segarra, 2017), as well as the real estate industry's increasing interest in the mixed-use redevelopment of ailing malls. Academic research could yield valuable insights into the obstacles to redevelopment.

The first part of this paper discussed what we have learned about many of the multiple factors required or associated with successful TODs: higher intensity and mixed-use zoning, land assembly, reduced parking requirements, requirements for new affordable housing, avoiding the loss of affordable housing. This section identifies the potential advantages and major disadvantages of redeveloping distressed regional malls compared to the redevelopment of most sites selected for light rail stations. Major advantages are the following: their large size, their potential for generating less community opposition; their increased access to transit that could enable reduced parking requirements; their potential for retaining or attracting neighborhood-oriented commercial uses; less demolition/less costly redevelopment; their consolidated ownership, and their potential for public-private partnerships. Major disadvantages include the loss of sales tax revenues for local, regional and state governments and the costs of providing public services, including public schools for a larger population. The section ends with a brief discussion of alternatives for transit provision.

5.1. Major Advantages of Redeveloping Failing Malls as TODs

5.1.1. *Size*

Regional Shopping Malls range from 40–100 acres, which is a sizable nucleus for a TOD. The size of such malls would reduce or eliminate the need for site assembly. Such large sites will be able to accommodate a large number and varied mix of housing, both rental and condo, important to ensure a vital mix of incomes.

5.1.2. Community Opposition Due to Induced Traffic, or Changes in Zoning

An existing shopping mall is already a large traffic generator. There may be less community opposition on this basis. Changes to higher density residential would be within the mall perimeter and may also generate less community opposition.

5.1.3. No Affordable Housing Directly Displaced

Since the redevelopment would be focused on the mall site, there would be no affordable housing directly displaced by the redevelopment, and no community opposition on this basis. Of course, any large redevelopment is likely to have spillover effects which is likely to displace affordable housing in its vicinity.

5.1.4. Potential for Supplying Affordable Housing

The redevelopment of several failing malls could contribute significantly to addressing the State's housing crisis, and, in particular, the Los Angeles Metropolitan Area's housing crisis, since the large footprints of regional malls could generate thousands of new housing units. The region's ongoing transit investments could ensure the conversion of such malls into successful TODs that avoid many of the usual obstacles confronting such developments.

5.1.5. Good Access to Transit will Enable the Reduction of Parking Requirements

With good access to transit, such TODs can minimize parking requirements. Such sites are large enough to experiment with reduced parking requirements and to study their effects.

5.1.6. Can Retain Compatible/Viable Retail

Such redevelopment may be able to retain or attract desirable and viable retail. Malls increasingly contain restaurants, movie theatres and other retail uses which would be compatible with a mixed use neighborhood.

5.1.7. Easier/Less Costly Redevelopment

Large parking areas will require less demolition than sites with buildings that have to be demolished and replaced.

5.1.8. Consolidated Ownership

Unlike most redevelopment areas with multiple owners, the ownership patterns of shopping malls are consolidated. This could make negotiations easier for local governments.

5.1.9. Potential for Public-Private Partnerships

Since 2015, California local governments have regained redevelopment powers, although, on a more limited basis. Still, local governments have the ability to use tax increment finance. In addition, a major asset that the public sector could bring to such partnerships is the ability to rezone.

5.2. Major Disadvantages

5.2.1. Loss of Sales Tax Revenues for Local and State Governments

In addition to property tax revenues for local governments, regional malls are large generators of sales tax revenues for state and local governments. Failing malls present a major threat to state and local government finances, although such threats can be turned to opportunities for their redevelopment (Shafroth 2017). The state sales tax is the second largest source of California's revenue, after the income tax, and in 2018, the rate was 7.250% (California Governor's Office 2018). Los Angeles County and Los Angeles City had a sales tax rate of 9.50%, which includes the State's 7.250% share. In terms of total local revenues, the sales tax made up 7% of unrestricted local revenue (Coleman 2016). The June 2018 U.S. Supreme Court decision on *South Dakota v. Wayfair* decreases the potential loss of sales tax revenues for both the State and local governments from the redevelopment of failing malls. The decision allows states to collect sales tax from all online retailers. Before this ruling, states could only collect sales tax from online retailers with a presence in the state. The *Wayfair* decision grants California the ability to collect state and local taxes on all of Amazon's or Walmart's e-commerce products. California's Tax Department director had estimated that if the State could collect taxes from more out of state retailers, it could gain over a billion dollars in sales revenues annually, which this Supreme Court decision will enable (Ashton and Chen 2018). In general, as a result of this decision, as internet sales increase, the loss of sales tax revenues due to the closing or the redevelopment of failing malls will decrease.

5.2.2. Increase in the Cost of Providing Services for A Residential Population

Redeveloping failing malls as TODs will add a residential population to an area, which will require a whole set of local residential services, including schools, health and safety services, etc. However, providing such services to residents of redeveloped malls may be less an issue of new, additional populations to be served, as of relocated populations, who are currently receiving such services either within the same locality or region. Ensuring school capacity for such redevelopments will be of particular importance. If localities with large redevelopment sites incur large costs in providing school or other residential services, the County or the State should make provisions to reduce such local costs.

5.3. Transit Provision for Redeveloped Malls

What about the transit provision in such TODs? The weak link in this proposal may be the provision of transit. Regional malls that are candidates for redevelopment may not be along the planned alignment of a light rail line, for example. However, light rail is not the only type of viable transit, and bus rapid transit (BRT) is gaining popularity in the U.S., and, in particular, in Southern California (Cervero and Dai 2014). Since 2005, Metro has been operating a successful BRT, the Orange Line.⁸ Under Metro, both the light rail system and the BRT system are

⁸ As it happens, the Westfield Promenade Mall, which is undergoing redevelopment and was discussed in the previous section, was the last stop in the Orange Line's BRT.

expanding, and there are opportunities in the coming decade to link mall/TOD conversions to such lines. High capacity bus lines linking such mall/TOD conversions to the light rail system could be a default option.

6. Conclusion

The retail development community is waking up to the redevelopment potential of declining malls. In order to ensure that such redevelopments meet multiple public purposes of increasing transit ridership and associated decreases in VMT and GHG emissions, increasing opportunities for housing in mixed use districts, and other urban amenities, public officials and planners can begin to study these opportunities and reach out to the retail industry to explore potential projects.

This white paper first explored the rationale for redeveloping failing malls as TODs, policies in support of TODs, and major research and evidence available for the effects of TOD features on reductions on VMT, air pollution and GHG emissions. It identified impediments to the development of TODs, and summarized recent industry outlooks on shopping malls. The final section identified and briefly discussed the major advantages and disadvantages of redeveloping failing malls as TODs.

As the next step beyond this study, and, in order to test the viability of the approach, a series of interconnected studies should follow, including:

- a. studies identifying failing malls in specific metropolitan regions;
- b. analyses of potential sites as transit markets—including studies of the density of the development around failing malls, population characteristics, current level of transit service, etc.;
- c. feasibility studies of providing different types of transit stations adjacent to the identified redevelopment sites;
- d. the development of a model (s) of how such malls could be redeveloped, including the steps to achieve TOD objectives, and, especially, modeling the types of housing, the number of housing units, as well as different mixes of affordable and market rate housing that such TODs could contain at different height and bulk standards, alternative retail and housing mixes, as well as different parking restrictions; and
- e. proto-types of public-private partnerships (Friedman 2016) that could be used in the redevelopment process, for example, in California, examining the feasibility of raising revenue with California's scaled back tax increment financing, and potential rezoning and affordable housing scenarios. Such studies would also require an understanding of different lender-owner arrangements in the failing malls, and the feasibility of redevelopment and public-private partnerships under different shopping mall lender-owner arrangements.

7. References

- Addison, C., S. Zhang, and B. Coomes. 2012. Smart Growth and Housing Affordability: A Review of Regulatory Mechanisms and Planning Practices. *Journal of Planning Literature* 28 (3): 215–257
- American Lung Association. 2018. *State of the Air 2018*. Retrieved on May 12, 2018 from: <http://www.lung.org/assets/documents/healthy-air/state-of-the-air/sota-2018-full.pdf>
- Ashton, A. and C. Chen. 2018. "Online Sales Tax Ruling Could Bring 'Hundreds of millions of dollars' to California." *Sacramento Bee*. July 2, 2018. Retrieved on Sept. 18 from: <https://www.sacbee.com/news/politics-government/the-state-worker/article214098319.html>
- Bainbridge, Robert. 2014. "The Stormy Future of Retail Real Estate." *The Appraisal Journal* 82 (2): 155–60.
- Bell, Dan. 2018. Dead Mall Series. YouTube. Retrieved on July 27, 2018: <https://www.youtube.com/playlist?list=PLNz4Un92pGNxQ9vNgmnCx7dwchPjGJ3IQ>
- Benmelech, Efraim, Nittai Bergman, Anna Milanez, and Vladimir Mukharlyamov. 2014. "The Agglomeration of Bankruptcy." Working Paper 20254. National Bureau of Economic Research. <https://doi.org/10.3386/w20254>.
- Bento, Antonio M., Maureen Cropper, Ahmed Mushfiq Mobarak, and Katja Vinha. 2005. "The Effects of Urban Spatial Structure on Travel Demand in the United States". *Review of Economics and Statistics* 87(3): 466–478
- Bernick, Michael, and Robert Cervero. 1996. *Transit Villages in the 21st Century*. New York: McGraw-Hill.
- Bloomberg. n.d. "The American Mall Game: A 2018 Retail Challenge." Accessed February 28, 2018. <https://www.bloomberg.com/features/american-mall-game/>.
- Boarnet, Marlon G., Xize Wang, and Douglas Houston. 2017. "Can New Light Rail Reduce Personal Vehicle Carbon Emissions? A before-after, Experimental-Control Evaluation in Los Angeles." *Journal of Regional Science* 57 (3): 523–539.
- Boarnet, Marlon G., Raphael Bostic, and et al., 2017. "Affordable Housing in Transit-Oriented Developments: Impacts on Driving and Policy Approaches." White Paper. National Center for Sustainable Transportation. <https://ncst.ucdavis.edu/white-paper/affordable-housing-in-transit-oriented-developments-impacts-on-driving-and-policy-approaches/>.
- Bodzin, Steven. 2003. "New Life for Old Malls." *Journal of Housing and Community Development* 60 (3): 51–55.
- Bowes, David R. and Keith R. Ihlanfeldt. 2001. "Identifying the Impacts of Rail Transit Stations on Residential Property Values". *Journal of Urban Economics* 60: 1–25.

- Brownstone, David, and Thomas F. Golob. 2009. "The Impact of Residential Density on Vehicle Usage and Energy Consumption." *Journal of Urban Economics* 65 (1): 91.
- California Air Resources Board. 2018a. Sustainable Communities. <https://www.arb.ca.gov/cc/sb375/sb375.htm>
- California Air Resources Board. 2018b. AB 32. California Global Warming Solutions Act. <https://www.arb.ca.gov/cc/ab32/ab32.htm>
- California Air Resources Board. 2017. California's Climate Change Scoping Plan. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf
- California Association for Local Economic Development. 2017. "Primer on California's New Tax Increment Financing Tools." <https://www.cacities.org/Resources-Documents/Policy-Advocacy-Section/Hot-Issues/New-Tax-Increment-Tools/CALED-TIF-Primer-3-17-FINAL.aspx>.
- California Governor's Office. 2018. Governor's Budget Summary 2017–2018. Retrieved from <http://www.ebudget.ca.gov/2017-18/pdf/BudgetSummary/RevenueEstimates.pdf>
- Calthorpe, Peter. 1993. *The Next American Metropolis: Ecology, Community and the American Dream*. Princeton, NJ: Princeton University Press
- Center for Transit-Oriented Development. 2010. Creating Successful Transit Oriented Districts in Los Angeles: A Citywide Toolkit for Achieving Regional Goals. Retrieved on 7/28/2018 from: http://media.metro.net/projects_studies/tod/images/CTOD%20-%20Creating%20Successful%20Transit-Oriented%20Districts%20in%20Los%20Angeles.pdf
- Cervero, R., and K. Kockelman. 1997. Travel demand and the 3Ds: Density, diversity, and design. *Transportation Research D*, 2(3), 199–219.
- Cervero, R., and J. Landis. 1997. "Twenty Years of the Bay Area Rapid Transit System: Land Use and Development Impacts" *Transportation Research A*: 31(4): 309–333.
- Cervero, R., and D. Dai. 2014. "BRT TOD: Leveraging Transit Oriented Development with Bus Rapid Transit Investments." *Transport Policy* 36: 127–138.
- Chapple, Karen. 2007. "Transit-Oriented for All: The Case for Mixed-Income Transit-Oriented Communities in the Bay Area Executive Summary - Reconnecting America." Reconnecting America. <http://www.reconnectingamerica.org/resource-center/browse-research/2007/transit-oriented-for-all-the-case-for-mixed-income-transit-oriented-communities-in-the-bay-area-executive-summary/>.
- Chatman, Daniel G. 2013. "Does TOD Need the T?: On the Importance of Factors Other Than Rail Access". *Journal of the American Planning Association*: 79(1): 17–31.
- Cherney, M. 2018. "Westfield Shareholders Approve Big Mall Deal." *Wall Street Journal*, 5/24/2018. Retrieved from: <https://www.wsj.com/articles/westfield-shareholders-approve-big-mall-deal-1527144203>

- City of Chicago Mayor's Press Office. 2015. "Mayor Emanuel Introduces Transit Oriented Development Reform Ordinance to Accelerate Development Near Public Transportation Stations" Accessed October 20, 2017.
https://www.cityofchicago.org/city/en/depts/mayor/press_room/press_releases/2015/july/mayor-emanuel-introduces-transit-oriented-development-reform-ord.html
- Clapp, John M., Katsiaryna Salavei, and Tingyu Zhou. 2014. "Expansions and Contractions of Major U.S. Shopping Centers". *The Journal of Real Estate Finance and Economics* 48(1): 16–56.
- Coleman, M. 2016. "A Primer on California City Revenues, Part One: Revenue Basics." Retrieved on Sept. 28, 2018 from <https://www.westerncity.com/article/primer-california-city-revenues-part-one-revenue-basics>
- Credit Suisse. 2018. CMBS Retail Outlook: transformation accelerating. Jan. 4, 2018. Retrieved on 7/20/18 from: https://research-doc.credit-suisse.com/docView?language=ENG&format=PDF&sourceid=csplusresearchcp&document_id=1080091741&serialid=pXHsk4mvE%2FPg%2BYIsoOUUnVyVpX6htl%2By2jIDMyUDG0rI%3D
- Cushman & Wakefield. 2018. Marketbeat. U S Shopping Center Q1, 2018. Retrieved on 7/10/2018 from: <http://www.cushmanwakefield.com/en/research-and-insight/2018/us-q1-2018-marketbeat>
- Dillon, Liam. 2018. "California Lawmakers Killed One of the Biggest Housing Bills in the Country." *Latimes.Com*, April 17, 2018. <http://www.latimes.com/politics/la-pol-ca-big-housing-bill-dies-20180417-story.html>.
- Dunham-Jones, Ellen, and June Williamson. 2016. "Dead and Dying Shopping Malls, Re-Inhabited" *Architectural Design* 87(5): 84–91.
- Ewing, R. and R. Cervero. 2001. Travel and the built environment. *Transportation Research Record*, 1780,87–114.
- Ewing, R. and R. Cervero. 2010. "Travel and the Built Environment: A Meta-Analysis". *Journal of the American Planning Association* 76(3): 265–294.
- Ewing, Reid, and Robert Cervero. 2017. "'Does Compact Development Make People Drive Less?' The Answer Is Yes." *Journal of the American Planning Association* 83 (1): 19–25.
<https://doi.org/10.1080/01944363.2016.1245112>.
- Ewing, Reid, Guang Tian, J. P. Goates, Ming Zhang, Michael J. Greenwald, Alex Joyce, John Kircher, and William Greene. 2015. "Varying Influences of the Built Environment on Household Travel in 15 Diverse Regions of the United States." *Urban Studies* 52 (13): 2330–2348.
- Ewing, Reid, Shima Hamidi, James B. Grace. 2016. "Compact Development and VMT—Environmental Determinism, Self-Selection, or Some of Both?" *Environment and Planning B: Planning and Design* 43(4): 737–755

- Ewing, Reid, Guang Tian, Torrey Lyons, Kathryn Terzano. 2017. "Trip and Parking Generation at Transit-Oriented Developments: Five U.S. Case Studies". *Landscape and Urban Planning* 160: 69–78.
- Folk, Kate. 2018. "Letter of Recommendation: Dead Malls". NY Times Magazine. July 25, 2018. Retrieved on July 26, 2018 from: <https://www.nytimes.com/2017/07/26/fashion/another-to-shopping-malls.html>
- Friedman, S. (Ed.). 2016. "Successful Public/Private Partnerships: From Principles to Practices." Washington, DC: Urban Land Institute. Retrieved from: <https://uli.org/wp-content/uploads/ULI-Documents/Successful-Public-Private-Partnerships.pdf>
- Gilbert, Ben. 2018. "The Death of the American Mall Is Perfectly Illustrated by This Crazy New Game." Business Insider. February 2018. <http://www.businessinsider.com/play-american-mall-the-game-2018-2>.
- Glackin, Stephen, and Peter Newton. 2015. "Engaging the Greyfields." *Instruments of Planning: Tensions and Challenges for More Equitable and Sustainable Cities*, 208.
- Golden, Bryan Lewis. 2013. "Retrofitting Greyfields: Strategies and Placemaking for Suburban Retail." University of Texas, Austin. <http://repositories.lib.utexas.edu/handle/2152/22684>.
- Haas, Peter, Gajus Miknaitis, Harley Cooper, Linda Young, and Albert Benedict. 2010. "Transit Oriented Development and the Potential for VMT-related Greenhouse Gas Emissions Growth Reduction". Prepared for the Center for Transit Oriented Development. Accessed September 20, 2017. <http://ctod.org/pdfs/2010TODPotentialGHGEmissionsGrowth.pdf>
- Hale, Benjamin William. 2012. "Redevelopment Strategies for Dead and Decaying Regional Shopping Centers: An Evaluation of Shoppingtown Mall in Dewitt, New York." Master's Thesis. Cornell University.
- Harvard Joint Center for Housing Studies. 2017. *The State of the Nation's Housing. 2017*. Retrieved from: http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/harvard_jchs_state_of_the_nations_housing_2017.pdf
- Hoffman, J. 2018a. "Mixed-Use Centers, Part I: The Economics of Place-Making." *Industry Insights*, 2/20/2018, ICSC. Retrieved from: https://www.icsc.org/uploads/t07-subpage/Mixed-Use_Center_%28Hoffman%29.pdf
- Hoffman, J. 2018b. "Mixed-Use Centers, Part II: Achieving Optimal Market Position." *Industry Insights*, 4/17/2018, ICSC. Retrieved from: https://www.icsc.org/uploads/t07-subpage/Mixed-Use_Center_II_Industry_Sector_Series.pdf
- Houston, Douglas, Marlon G. Boarnet, Gavin Ferguson, and Steven Spears. 2015. "Can Compact Rail Transit Corridors Transform the Automobile City? Planning for More Sustainable Travel in Los Angeles" *Urban Studies* 52(5): 938–959.

- International Council of Shopping Centers. 2017. U.S. Center Classification and Characteristics. Accessed October 2, 2017. http://www.icsc.org/uploads/research/general/US_CENTER_CLASSIFICATION.pdf
- Kane, K., et al., 2018. "Retail Land Use in Orange County: An Examination of Future Potential." White Paper. Los Angeles: SCAG and OCBC. <http://scag.ca.gov/Documents/RetailLandUseReportInOC.pdf>.
- Khoury, Andrew. 2017. "Dying Shopping Malls Can Make Room for New Condos and Apartments". *Los Angeles Times*. Accessed October 20, 2017. <http://www.latimes.com/business/la-fi-retail-housing-20170929-story.html>
- Kurutz, Steven. 2017. An Ode to Shopping Malls. *New York Times*. July 26, 2017. Retrieved on July 26, 2018 from: <https://www.nytimes.com/2017/07/26/fashion/an-ode-to-shopping-malls.html>
- Los Angeles County Metro. 2018a. "How to Pass a Major Transportation Measure." <http://theplan.metro.net/wp-content/uploads/2018/05/report-theplan-lessons-learned-2018.pdf>
- Los Angeles County Metro. 2018b. "Los Angeles County Metropolitan Transportation Authority Transit Oriented Development Planning Grant Program Guidelines. Round 5." Los Angeles County Metro. https://media.metro.net/projects_studies/joint_development/images/Round_5_Guidelines.pdf.
- Los Angeles Department of City Planning. 2017. "Transit Oriented Communities Affordable Housing Incentive Program Guidelines (TOC Guidelines). Accessed October 16, 2017. <https://planning.lacity.org/ordinances/docs/TOC/TOCGuidelines.pdf>
- Lund, Hollie M., Robert Cervero, Richard W. Wilson, Marian Lee-Skowronek, Anthony Foster, David Levitan, Sally Librera, Jody Littlehales. 2004. "Travel Characteristics of TOD in California". Prepared for Caltrans. Accessed. October 16, 2017. https://www.bart.gov/sites/default/files/docs/Travel_of_TOD.pdf
- Manville, Michael, Alex Beata, and Donald Shoup. 2013. "Turning Housing into Driving: Parking Requirements and Density in Los Angeles and New York." *Housing Policy Debate* 23 (2): 350–375.
- Manville, M., B. D. Taylor, and E. Blumenberg. 2018a. Falling Transit Ridership: California and Southern California. https://www.scag.ca.gov/Documents/ITS_SCAG_TransitRidership.pdf
- Manville, M, B. D. Taylor, and E. Blumenberg. 2018b. "Transit in the 2000s: Where Does It Stand and Where Is It Headed?" *Journal of Public Transportation* 21 (1): 11.
- Moudon, Av. 1997. "Boulevard Embryo + Boca-Raton's New Mixed-Use Development: Mizner-Park." *Places-A Forum Of Environmental Design* 11 (1): 70–71.

- Mulholland, Sarah. 2018. "Why Some Shopping Malls May Be in Deeper Trouble Than You Think - Bloomberg." News. Bloomberg. January 8, 2018. <https://www.bloomberg.com/news/articles/2018-01-08/why-some-shopping-malls-may-be-in-deeper-trouble-than-you-think>.
- O'Malley, Sharon. 2016. "Developers Reinventing an American Institution." Issue: Shopping Malls, *Business Researcher*, Sage Publications. Retrieved on 9/12/2017 from: <http://businessresearcher.sagepub.com/sbr-1775-100682-2747381/20160829/short-article-developers-reinventing-an-american-institution>.
- Parlette, Vanessa and Deborah Cowen. 2011. "Dead Malls: Suburban Activism, Local Spaces, Global Logistics". *International Journal of Urban and Regional Research* 35(4): 794–811.
- Parment, Anders. 2013. "Generation Y vs. Baby Boomers: Shopping Behavior, Buyer Involvement and Implications for Retailing". *Journal of Retailing and Consumer Services* 20: 189–199.
- Puget Sound Regional Council. 2015. Transit Supportive Densities and Land Uses. A PSRC Guidance Paper. Feb. 2015. <https://www.psrc.org/sites/default/files/tsdluguidancepaper.pdf>
- Riley, Suzanne Adele. 2009. "Greyfield Redevelopment: A Growth Management Opportunity." Masters Thesis, Dept. of Community and Regional Planning, University of Texas, Austin. <http://repositories.lib.utexas.edu/handle/2152/22555>.
- Sacramento Regional Transit. 2009. *A Guide to Transit Oriented Development (TOD)*. Retrieved 7/30/2018 from: <https://www.sacrt.com/realestate/Real%20Estate%20Docs/TOD-Final.pdf>
- Salon, Deborah, Marlon G. Boarnet, Susan Handy, Steven Spears, Gil Tal. 2012. "How Do Local Actions Affect VMT? A Critical Review of the Empirical Evidence" *Transportation Research Part D* 17: 495–508.
- Santasieri, Dr. Colette. n.d. "Planning for Transit Supportive Development: A Practitioner's Guide." FTA Report: 0054. Washington D C, USA: Federal Transit Administration. https://www.transit.dot.gov/sites/fta.dot.gov/files/FTA_Report_No._0054.pdf.
- Schuetz, Jenny, Genevieve Giuliano, and Eun Jin Shin. 2018. "Does Zoning Help or Hinder Transit-Oriented (Re) Development?" *Urban Studies* 55 (8): 1672–1689.
- Schuetz, Jenny, Genevieve Giuliano, and Eun Jin Shin. 2016. "Is Los Angeles Becoming Transit Oriented?" https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2728612.
- Segarra, Marielle. 2017. "How a Mall-Turned-Public-Park Saved Downtown Columbus". *Marketplace*. Accessed October 20, 2017. <http://www.latimes.com/business/la-fi-retail-housing-20170929-story.html>

- Seto, K., S. Dhakal, A. Bigio, H. Blanco et al., 2015. Chapter 12. Human Settlements, Infrastructure and Spatial Planning. In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, et al., (eds.)]. March 2015, Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Shafroth, F. 2017. Where a Shopping Mall Used to Be, an Opportunity Arises. *Governing*, May 2017. Retrieved on Sept. 23, 2018 from <http://www.governing.com/columns/public-money/gov-shopping-mall-revenues-taxes.html>
- Shoup, Donald. 2001. "Graduated Density Zoning". *Journal of Planning Education and Research* 28: 161–179
- Sicola, M. and M. Stapp. 2018. "Transforming Class B and C Retail Centers: An Overview." *Industry Insights*, 1/29/2018, ICSC. Retrieved from: https://www.icsc.org/uploads/t07-subpage/Transforming_Class_BC_Centers.pdf
- Southern California Association of Governments. 2012. *Final Regional Transportation Plan 2012-2035: Sustainable Communities Strategy Towards a Sustainable Future*. April 2012.
- Southworth, Michael. 2005. "Reinventing Main Street: From Mall to Townscape Mall". *Journal of Urban Design* 10: 151–170.
- Spears, Steven, Marlon G. Boarnet, and Douglas Houston. 2016. "Driving Reduction after the Introduction of Light Rail Transit: Evidence from an Experimental-Control Group Evaluation of the Los Angeles Expo Line." *Urban Studies*, 0042098016657261.
- Stevens, Mark R. 2017. "Does Compact Development Make People Drive Less?" *Journal of the American Planning Association*: 83(1): 7–18.
- Transportation Research Board and National Research Council. 2009. *Driving and the Built Environment: The Effects of Compact Development on Motorized Travel, Energy Use, and CO2 Emissions -- Special Report 298*. <https://doi.org/10.17226/12747>.
- Tian, Guang, Reid Ewing, Rachel Weinberger, Kevin Shively, Preston Stinger, Shima Hamidi. 2017. "Trip and Parking Generation at Transit-Oriented Developments: A Case Study of Redmond TOD, Seattle Region". *Transportation* 44: 1235–1254.
- Tobenkin, D. 2017. "REITs and Mixed-Use Development". REIT magazine, Nov./Dec. 2017. Retrieved from: <https://www.reit.com/news/reit-magazine/november-december-2017/reits-and-mixed-use-development>
- U.S. Census. 2017. Housing Vacancies and Homeownership (CPS/HVS). Table 6. Rental Vacancy Rates for the 75 Largest Metropolitan Statistical Areas: 2015 to 2016. Retrieved from: https://www.census.gov/housing/hvs/files/annual16/ann16t_6.xlsx

- U.S. Census. n.d. "Lot Size of New Family Homes Completed." U.S. Census. Characteristics of New Housing. Accessed August 4, 2018. <https://www.census.gov/construction/chars/pdf/lotsize.pdf>.
- U.S. DOT, Federal Transit Administration. 2018a. FAST Act. Retrieved on 9/20/2018 from: <https://www.transit.dot.gov/FAST>
- U.S. DOT, Federal Transit Administration. 2018b. TOD in Statute and Regulation. Retrieved on 7/12/2018 from: <https://www.transit.dot.gov/funding/funding-finance-resources/transit-oriented-development/tod-statute-and-regulation>
- Westfield Promenade. 2018. Westfield Promenade website. Retrieved on Sept 21, 2018 from: <https://promenade2035.com/project.php>
- Wiener, Scott. 2018. *SB-827 Planning and Zoning: Transit-Rich Housing Bonus*. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB827.
- Wilke, Julie Ann. 2006. "Achieving Transit Value Capture in the Suburbs : The Redevelopment of Greyfield Shopping Malls," Master's Thesis, May. Dept. of Community and Regional Planning, University of Texas. <http://repositories.lib.utexas.edu/handle/2152/22576>.
- Zhai, Qing, Xinyu Cao, Patricia L. Mokhtarian, and Feng Zhen. 2017. "The Interactions Between E-Shopping and Store Shopping in the Shopping Process for Search Goods and Experience Goods". *Transportation* 44: 885–904.
- Zhang, Danlei, Pengyu Zhu, and Yanmei Ye. 2016. "The Effects of E-Commerce on the Demand for Commercial Real Estate". *Cities* 51: 106–120.