

# RESTRUCTURING THE COMMERCIAL STRIP

*A Practical Guide for Planning the  
Revitalization of Deteriorating Strip Corridors*

Prepared for the

United States Environmental Protection Agency

Under Work Assignment 3-28:

**DEVELOPMENT OF A NATIONALLY REPLICABLE APPROACH TO  
SMART GROWTH CORRIDOR REDEVELOPMENT**

By

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## PREFACE

Commercial strip corridors are a common sight in American towns and cities. They typically connect downtowns with outer neighborhoods, but are also prevalent in suburban locations—often as the only connection between neighborhoods and destinations such as office parks and shopping malls. In the last 50 years, commercial strip corridors have accounted for a substantial amount of retail and development activity in the United States, but in many communities, commercial strip corridors are aging and many of them are losing their attractiveness as development locations. These locations are experiencing disinvestment, resulting in vacant, abandoned, and underused property, such as abandoned gas stations, and obsolete retail strip centers. But despite disinvestment, these corridors remain key parts of regional transportation networks and are often well positioned for reuse and redevelopment because of the high volumes of traffic that they continue to experience.

The U.S. Environmental Protection Agency's (EPA) Smart Growth Program commissioned this document to provide communities with guidance on how they can revitalize these commercial corridors to accommodate economic growth, reuse land already serviced by existing infrastructure, and reflect the unique character of the town or city where they are located. In addition, revitalization achieves positive environmental outcomes. Revitalization of commercial strips into multimodal corridors encourages the clean-up and reuse of contaminated properties, helping to protect regional water quality by reducing the amount of paved surfaces in a watershed and by allowing natural lands to filter rainwater and runoff before it reaches drinking-water supplies. Furthermore, air quality benefits are achieved when the roadway itself is redesigned to accommodate walking, biking, and transit and abutting properties are redesigned as compact, mixed-use neighborhoods that further support alternatives to driving. Increasing transportation choices can reduce air pollution by reducing the amount people need to drive to get to everyday destinations and thus reducing harmful emissions.

Comprehensive corridor redevelopment requires careful attention to both sides of the corridor's right-of-way line. The land use pattern and the thoroughfare design should be planned together and reinforce each other. For properties lining the corridor, revitalization requires a restructuring of land use and development patterns. A change from auto-oriented to multimodal transportation through and near the corridor can help guide and focus redevelopment, which in turn will enhance mobility through the corridor. Orchestrating corridor redevelopment also requires leadership by local government. Commercial strips are composed of hundreds or even thousands of separate parcels—far too many individually owned properties for any single property owner or developer to substantially influence. Also, with the future of a prominent part of the neighborhood at issue, stakeholder and resident involvement in the re-planning process will be critical to making sure the revitalization meets local needs, to political acceptance, and to implementation. The local government's overarching goal is to provide a credible and reliable development context within which private and public dollars will be invested to create a different type of corridor, from which residents, business owners, the municipality, and other stakeholders can once again derive value.

Coordinating public infrastructure investments with land use planning and private development activity along corridors is a focus of EPA's Smart Growth program. Since 2005, the Smart Growth Program has conducted a Smart Growth Implementation Assistance (SGIA) Program, which solicits applications from communities that need help resolving a development-related challenge. Many of the applications that the SGIA program receives each year deal with a corridor-related challenge, showing a clear need for more resources to help communities revive and support their commercial corridors.

From 2005 to 2010, EPA assisted five communities dealing with corridor development and redevelopment issues. Descriptions of each community follow, and the reports, which contain helpful policy and design options and extensive resources, are available at [http://www.epa.gov/smartgrowth/sgia\\_communities.htm](http://www.epa.gov/smartgrowth/sgia_communities.htm). In McCall, Idaho, EPA's assistance gave the city options for addressing concerns over potential future development impacts of a newly established roadway. Assistance to Taos, New Mexico, and College Park, Maryland, focused on redevelopment of specific, existing corridors. Denver, Colorado, was exploring a city- and county-wide strategy for retrofitting all large commercial corridors. In Las Cruces, New Mexico, assistance is being provided (as of spring 2010) to develop a public engagement program for re-envisioning a major commercial corridor that includes environmental justice and equitable development issues important to surrounding neighborhoods.

### **McCall, Idaho (2005)**

McCall, Idaho, is becoming a popular destination for homebuyers because of its scenic beauty. Between 2000 and 2005, the population of McCall increased 41 percent. The opening of Tamarack, a ski resort just 15 miles south of McCall, also fueled real estate demand. Alongside this growth, the city had recently opened the East-West Loop Road with hopes of reducing downtown congestion and giving truck traffic the option to avoid the pedestrian-friendly downtown. Because the new road provided access to the state highway, and given the intensity of the growth, the city anticipated that there would be considerable development pressures along the Loop road. The city was concerned that this pressure could create development that was inconsistent with McCall's character and that could cause congestion on the newly built road. To address these concerns, the city requested assistance from the SGIA Program to develop options for responding to growth along the new East-West Loop Road that would meet community goals. EPA assembled a team of experts to work with city officials, local leaders, community representatives, and others to create a vision for the development at two sites along the road. As part of those meetings and consultations, the team developed:

- Concept plans illustrating approaches that would maintain the character of McCall; provide housing opportunities so that those who work in McCall can live in McCall; make connections to downtown; and take advantage of economic opportunities and the strength of the market.
- Implementation options that included an amendment to the comprehensive plan and zoning map and entering into development agreements during permit applications and/or re-zonings.

Following the release of the report, community leaders decided to adopt designs created during the on-site workshop into their comprehensive plan.

### **Taos, New Mexico (2005)**

New Mexico State Highway 68, also known as the Paseo del Pueblo Sur commercial corridor, cuts through the center of Taos, leading traffic to the Taos Historic District, museums, and many other destinations in the area. It carries an average daily traffic volume of roughly 23,000 vehicles. Much of the streetscape leading to the historic downtown has strip commercial development and underused parking lots with little or no landscaping. Residents felt that this style of development along the highway did not fit with Taos' unique historic character.

The town of Taos requested EPA assistance to help make development along the Paseo del Pueblo Sur commercial corridor stronger economically and more attractive. Through meetings with residents, town staff and officials, property owners, and others, a vision for the corridor emerged. In particular, residents wanted to preserve Taos' unique character and to receive specific implementation steps toward their vision. Based on the community's goals, the EPA-led team developed a number of options the town could consider to transform both the feel and the function of the corridor, including:

- Better managing traffic through a combination of strategies, including alternate routes in a connected street network, access management, transportation demand management, better pedestrian and bicycle facilities, better public transit, and more efficient parking management;
- Establishing a distinct character for sections of the Paseo through street design, which also makes the road safer and more pleasant for drivers, pedestrians, and bicyclists; and
- Making the Paseo a community center by creating nodes of activity, mixing land uses along the corridor, and using building and site design that reinforces Taos' unique sense of place.

The town planned to use the EPA team's report to work with the New Mexico Department of Transportation on its scheduled redesign of part of the Paseo, to formalize neighborhood associations, to develop a green infrastructure plan, and to complete its Land Use Master Plan. In the meantime, the town has used the report to educate the community about growth and development issues.

### **College Park, Maryland (2006)**

The city and residents of College Park had a vision of the U.S. Route 1 corridor leading into College Park and the University of Maryland as a great street and welcoming gateway. In response, the 2002 Sector Plan envisioned a community Main Street with shops, homes, and offices mixed together to create a vibrant backbone to the city of College Park. However, after four years of implementation, the vision was not being realized. The tools that were established in the Sector Plan were not producing the results that residents expected while development continued to occur.

As part of its response to this realization, the city of College Park requested assistance through the SGIA Program to understand the disconnect between the vision for the U.S. Route 1 corridor and the development that was occurring and to get the tools to achieve the vision. The EPA-led team identified best practices from around the country, collected and analyzed local data, and worked with local partners to develop options for the city and county to consider. The team's proposed options included:

- Locate retail in specific nodes and create a form-based development code to help get the development the city wanted.
- Design U.S. Route 1 to be a pedestrian-welcoming, retail-active boulevard that supports the desired “Main Street” function at specific nodes.
- Implement a comprehensive transportation demand management plan that meets travel demand through a complete set of travel choices and takes advantage of the shorter travel distances produced by the land use changes.
- Create a collaborative development review process to provide predictability, certainty, and flexibility; fairness to developers, residents, property owners, and business owners; economic feasibility; and respect for neighborhood values.

In the months following the report's approval, the city of College Park implemented two of the key options outlined in the report: preparing a form-based code to better direct the redevelopment of the commercial corridor and undertaking a transportation demand management study to identify appropriate measures for reducing traffic congestion, including the feasibility of a Route 1 trolley.

### **Denver, Colorado (2008)**

The city of Denver is growing. During the last few decades, the regional economy has expanded, bringing new jobs, residents, and a positive civic identity. City leaders believe that the next frontier for growth in Denver region is the retrofitting of commercial and business corridors. In response, the city launched the Living Streets Initiative in 2008. This initiative is a multi-jurisdictional effort to shape future street investments and policies and transform existing commercial corridors in pedestrian-oriented, multimodal streets that can support a dense, vibrant mix of shops, offices, and residences.

With the EPA team, the city sponsored a four-day, public, living streets workshop in 2008. The workshop illustrated how living streets concepts could be applied in Denver and identified implementation strategies to advance the city’s Living Streets Initiative. The workshop focused on the “Fulcrum” portion of the Downtown-Cherry Creek corridor. The team’s report presented principles and design strategies to implement living streets along commercial corridors in the city and region:

- Reduce the number of lanes dedicated to cars.
- Create a pedestrian- and transit-friendly streetscape.
- Relate development to the street.
- Identify policy actions that can support living streets in Denver.

Since the workshop, the city completed a market opportunity study that found overwhelming evidence that economic vitality is enhanced through investment in pedestrian, bicycle, and transit infrastructure and related amenities. The city also hosted five educational events for policy-makers and professionals featuring national experts on the themes of policy and politics, engineering and design, public health, economic development, and finance and implementation. Finally, the city hosted five workshops in different neighborhoods to engage the public on the potential benefits and tradeoffs of living streets and receive input and feedback.

### **Las Cruces, New Mexico (2009)**

The El Paseo corridor is a 1.7-mile corridor that extends southeast from Main Street in downtown Las Cruces to the New Mexico State University campus. El Paseo is an active mixed-use corridor with a diverse population. Physically, the corridor is characterized by viable businesses and institutions that provide a variety of goods and services to the community. Adjacent to the avenue are middle- to lower-income neighborhoods, a local high school, a senior center, and other community services. The corridor is also home to some of the highest commercial vacancy rates in the city. The design is auto-oriented and is dominated by strip malls separated from the street by large parking lots. These design factors, combined with heavy automobile traffic, make the area unpleasant and dangerous to pedestrians.

The city of Las Cruces is committed to developing a robust public participation model that includes a deliberative planning and visioning process applicable not only to the corridor, but to other areas of the city that share similar demographics. To that end, in 2009 the city sought assistance from the SGIA Program to develop a model for outreach and public participation that uses multiple, non-traditional techniques to engage and build collaborations among the government, residents, and stakeholders. The city intends to use these techniques to develop a community-driven vision for the El Paseo corridor and to help with the larger regional comprehensive planning process currently being developed (Vision 2040). The community developed the following project goals:

- Identify strategic policies and regulatory tools in support of new and/or revised street standards and land uses that support fair choices in housing, mobility, and commercial activity.
- Demonstrate the potential application of public participation tools to fair redevelopment efforts in the El Paseo Corridor Area.
- Develop options for how a public participation strategy or toolkit could be applied to the Vision 2040 efforts.
- Develop a model for public participation that uses multiple and non-traditional techniques to engage and build collaborations among government leaders, residents, and stakeholders.

The U.S. Department of Transportation and the U.S. Department of Housing and Urban Development are joining EPA in the Las Cruces project as part of the Partnership for Sustainable Communities that the three agencies established in 2009. As of spring 2010, the three federal agencies are working closely with staff from the city, the metropolitan planning organization, and community stakeholders in planning a series of public involvement activities to be held in the summer and fall of 2010. Events being planned include pedestrian audits, a design visualization charrette, green infrastructure workshops, and stakeholder meetings focused on identifying municipal tools to encourage fair and equitable redevelopment of vacant and underused parcels along the El Paseo Corridor.

Through working with these communities, EPA discovered the need for a guidebook that help lay out steps communities can follow to revitalize their commercial corridors. This publication is intended to help fill that gap and to give communities a new resource to help them bring their underused, aging corridors back to environmental sustainability and economic and social vibrancy.

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# 1. THE COMMERCIAL STRIP IN TRANSITION

## 1.1 *The Advent, Reign, and Dissolution of the Strip*

Americans who came of age in the middle of the 20<sup>th</sup> century can remember living in a world in which all major shopping, offices, theaters, and government services were downtown, with grocery markets and convenience stores clustered in neighborhoods. All that changed in the 1960s, when roads leading from downtown to the newly emerging suburbs were widened, stores and restaurants were set back behind parking lots, and the commercial strip was born. The strip became the universal standard for suburban retail development: low-slung commercial buildings, front parking lots, and tall, auto-oriented signs arrayed along wide thoroughfares extending from downtown to the suburbs. They seemed to match the look and feel of the new automobiles and modern architecture.

By the 1980s, virtually every city in America had strips leading to the suburbs (Figs. 1-2), and many had several. And the suburban downtowns were dead or dying. Newer suburban cities had no downtowns at all, just the strip and the mall. In a very short period of time, the strip has become so familiar that it is hard to imagine our communities without them.



*Figure 1. A strip corridor in an urban setting. Image: Freedman Tung & Sasaki*



*Figure 2. A strip corridor in a suburban setting. Image: Freedman Tung & Sasaki*

But in the 21<sup>st</sup> century, transforming the strip has become important to many cities and towns. Although some strips remain successful, overall the strips tend to have underperforming retail stores and generally do not work as arterial thoroughfares. In such strips, vacancies are high, sales per square foot are low, and money to reinvest in aging structures is scarce. Easy traffic movement is a thing of the past on many strips, as peak traffic mounts in both duration and volume. And with public interest in solutions to combat global warming, concern about volatile fuel prices, and desire for authentic places, the strip's sameness, its automobile-oriented design, and its pavement-dominated environment are increasingly at odds with the public's preferences. However, many older strips are bordered by neighborhoods that depend on services and convenience retail within walking distance, and could be redeveloped into walkable, mixed-use, transit-oriented streets.

There is a silver lining to the creeping obsolescence of the strip. As strips are revitalized, communities have the opportunity to also improve the quality of life for their neighborhoods, create new economic opportunities, and make the strips more attractive, more environmentally responsible, and more accessible to people with or without automobiles. This report provides a roadmap for communities to harness the forces of market demand in combination with the need for environmental and economic sustainability to restore value to aging commercial corridors. This first section summarizes the forces that created and fostered the growth of the strip and those that are now undermining it. The second section contains a practical guide for communities to respond strategically and effectively to harness those forces to revitalize our commercial corridors. The report concludes with a third section focused on implementation.

## 1.2 *The Advent and Mass Production of the Strip*

The strip came along with the post-World War II demand for suburban development that physically transformed the nation. The first big waves of that boom consisted nearly entirely of housing—initially there were virtually no stores, restaurants, services, or even schools. The expanding suburban population’s need for convenient access to goods and services of all kinds provided an enormous opportunity to connect the new suburbs, and a need for auto-oriented development.

Although the strip is popularly believed to be a creature of the free market, the shopping venues built in the new suburbs took the form of the strip primarily in response to government actions. Government subsidies in the form of the federal home mortgage program and the interstate highway system stimulated the movement of households from cities to the new suburbs, providing the market demand and the infrastructure for other uses to follow. In 1954, Congress created a massive subsidy for suburban commercial development by modifying the tax code to allow owners to depreciate new commercial buildings in seven years, in place of the long-standing 40-year requirement.<sup>1</sup> This “accelerated depreciation” sparked a 30-year construction boom in cheap strip



*Figure 3. Strip buildings built under accelerated depreciation from 1954 to 1986 had no incentive to build for quality or longevity. Image: Freedman Tung & Sasaki*

commercial buildings, along with disincentives to maintain them (Fig. 3). This fiscal formula persisted until the passage of the Tax Reform Act of 1986, coupled with the recession of the late 1980s, but it took nearly another decade to absorb the glut of cheap retail space.<sup>2</sup> Land use standards for the new suburbs provided further incentives to build quickly and cheaply by applying commercial zoning in linear arrangement to miles and miles of properties lining the new suburban

<sup>1</sup> Hayden, D. *Building Suburbia*. Pantheon Books, 2003, p. 162.

<sup>2</sup> *Ibid*, p. 164.

roadways, vastly expanding the supply of land for commercial investment.<sup>3</sup>

This economic climate led to the construction of inexpensive, single-story buildings on abundant, inexpensive properties at low densities. The combination of low densities and new roadways provided little in the way of pedestrian comfort, customers arrived in automobiles rather than on foot. With the focus now on autos, buildings were placed at the rear of the site and the parking and signs at the front—and the commercial strip was complete.

Nationwide subsidy programs, nationwide roadway design standards, and nationwide zoning standards created successive waves of rapid suburban development resulted in the mass production of standardized appearance along commercial corridors:

- Free-standing stores surrounded by asphalt parking lots with many driveways, pole signs, and limited landscaping (Fig. 4);
- Signs that outdo the buildings in both size and character;
- Buildings of modest or minimal visual distinctiveness (Fig. 5);
- Wide, multilane roadways edged with monolithic curb-gutter-and-sidewalk assemblies with narrow sidewalks and little or no curbside parking or pedestrian amenities; intersections with multi-phased signals that may have two or even three left-turn pockets, widening the crossing distance even more at busy intersections (Fig. 6); and
- Long, undifferentiated corridors dominated by retail uses, with other commercial activities and various special uses such as schools, cemeteries, and hospitals mixed in (Fig. 7).



*Figure 4. An example of the predominance of paved surface parking associated with strip retail. Image: Microsoft Virtual Earth*



*Figure 5. Strip corridor “monument” signs are typically more prominent than their associated buildings. Image: Freedman Tung & Sasaki*

<sup>3</sup> Barnett, J. *Redesigning Cities*. Planners Press, 2003, p. 151.



Figure 6. Example of a wide, multilane arterial intersection. Image: Microsoft Virtual Earth



Figure 7. An example of the strip's linear development pattern. Image: Microsoft Virtual Earth

Dissatisfaction with the commercial strip has become increasingly common. Civic leaders fret about its ugliness (Fig. 8). Commuters complain about its congestion, while business owners on the strip suffer when congestion discourages customers. Would-be pedestrians and bicyclists want the strips to be safer and more appealing for people not in cars. Most recently, environmental activists, urban planners, and transit supporters have united in their concern that strip development epitomizes the “unsustainability” of suburban sprawl: strip corridors’ extensive parking lots and paved surfaces, long distances between stores, poor connectivity between uses, and low-density land coverage all discourage walking, bicycling, and transit use (Fig. 9); generate multiple single-purpose vehicle trips; increase use of and dependence on fossil fuels; and contribute to air pollution, urban heat island effects, increased stormwater runoff, and depletion of water resources and wildlife habitat.<sup>4</sup> This coalition also draws attention to the connection between auto-oriented sprawl and health problems, including obesity, asthma, and other ailments.<sup>5</sup>



Figure 8. Strips are often the most visible and least attractive portions of a community. Image: Freedman Tung & Sasaki



Figure 9. Pedestrian facilities on many strips lack adequate space and protection from vehicular traffic. Image: Freedman Tung & Sasaki

<sup>4</sup> McKee, B. “As Suburbs Grow, So Do Waistlines.” *New York Times*, September 4, 2003; Pryne, E. “2 Studies: Urban Sprawl Adds Pounds, Pollution.” *Seattle Times*, January 26, 2006.

<sup>5</sup> Frumkin, H., Frank, L., and Jackson, R. *Urban Sprawl and Public Health*. Island Press, 2004.

### 1.3 Forces of Change Undermining the Strip

The strip remained the shopping industry's preferred format for suburban retailing for nearly four decades. The industry preferences, government subsidies, and supportive zoning regulations that instigated the strip also combined to make the strip relatively impregnable to change and the assumed form for most, if not all, commercial development in suburban cities and townships. More recently, however, fundamental and cumulative changes in retail development practices have been undermining the continued viability of the strip.

First, the construction of the interstate highway system in the 1960s and 1970s created freeway interchanges that provided enormous visibility and access in comparison to other locations along the long commercial corridors. This framework did not have much of an effect on the viability of the strip, however, until the 1980s, when large concentrations of stores were designed to take increasing advantage of the highway interchanges, multiplying dramatically in number and type. Newer and larger regional malls, anchored by department stores, were located almost exclusively at large sites at freeway interchange locations to maximize regional visibility and access (Fig. 10).



Figure 10. Example of a regional mall at a regional crossroads: Southcenter Mall, Tukwila, Washington. Image: Microsoft Virtual Earth

Later in the 1980s, developers and financiers expanded this trend by inventing an array of enlarged and more specialized clustered retail formats. These included “category killer” clusters (a large single-themed store, like electronics, furniture, or bed and bath, intended to capture market share from smaller stores), big-box and superstore-anchored centers, and increasingly large supermarket-anchored neighborhood centers. All of these new formats needed large acreages at high-visibility, high-traffic locations. This amounted to a change in the preferred form for suburban shopping center development from linear strip and mall to a nodal pattern of evolving shopping centers.

In the 1990s, lifestyle changes and consumer preferences instigated a shift from the decades-old enclosed shopping mall and strip center formats to open-air “lifestyle centers” that combined shopping with leisure activities. These developments featured buildings with downtown-like articulated storefronts and façades, main streets, plazas, promenades, and village greens (Fig. 11). These lifestyle centers required large sites at primary crossroads with high drive-by volumes to deliver the number of customers needed to support their concentration of retail, entertainment, and dining activities. These developments also shifted further away from the exclusively auto-oriented shopping environment of strip retail toward a shopping experience organized around the pedestrian.



*Figure 11. The Grove at the Farmer’s Market in Los Angeles, California, is one example of a lifestyle center. Image: Freedman Tung & Sasaki*



*Figure 12. Santana Row San Jose, California, is a lifestyle center with residences above the stores. Image: Freedman Tung & Sasaki*

Continuing this transformation to more urban, amenity-driven formats, lifestyle centers have been morphing into “city center” developments with the addition of housing and offices over the retail. As with the retail-only formats, the preferred locations for these centers are at freeway interchanges and major arterial intersections. Projects like Mizner Park in Boca Raton, Florida; Mashpee Commons in Mashpee, Massachusetts; and Santana Row in San Jose, California (Fig. 12), illustrate this trend. More recent projects include Belmar in Lakewood, Colorado, and the Domain in Austin, Texas, each built on sites of over 80 acres.

These large, clustered, crossroads-located shopping formats are monopolizing demand for the retail, entertainment, and services formerly spread out in linear strips along arterials. Linear strip developments cannot coexist with the large centers—there are not enough homes or offices in any suburban trade area to support both. The old strip model of free-standing strip retail with its own private parking lot, its own advertising program, and its own sign finds it harder to compete with the visibility, financing, and drawing power of the newer centers. However, along older strips that were widened adjacent to existing neighborhoods, some neighborhood-serving retail, restaurants, and entertainment still function well—but would be stronger if the corridor were better connected to this base and made more walkable.

In comparison with crossroads centers, the “in-between” portions of strips also have particular conditions that exacerbate their market and development weaknesses. These include:

- A legacy of low-quality, short-lived construction along the strip instigated by the previous period of accelerated depreciation;
- A vast oversupply of properties zoned for retail use; and
- Inflexibility of typical strip property configurations, which have very long blocks, often with shallow parcels that are economically inefficient to redevelop, hemmed-in by stable and valuable single-family homes.



Figure 13. Disinvestment along the strip affects properties at all scales of development. Image: Freedman Tung & Sasaki

As a result, the strip's typical pattern today is one with more prosperous concentrations on large sites at the major crossroads and a high level of disinvestment on the sites in between (Fig. 13). By 2001, the Urban Land Institute (ULI) had declared that "the future of strip development is becoming less certain."<sup>6</sup> As time goes by, linear strip retail is likely to continue to lose value. This pattern of succession and disinvestment is not new—strips themselves once drained value from many a downtown, and the crossroads centers are repeating the pattern today (Fig. 14).

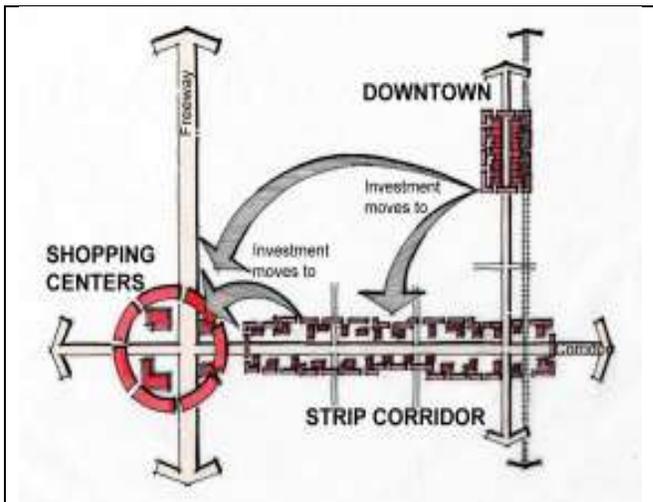


Figure 14. Diagram of retail succession: strips first drained retail away from traditional downtowns, and freeway/arterial clusters then pulled higher-value retail from strips. Image: Freedman Tung & Sasaki

The escalating destabilization of the strip comes at a time of not only shifts in demographics and associated consumer preferences, but also growing concerns about inefficient use of natural resources and the costs and environmental impacts of sprawling development patterns. Communities will probably be motivated to re-plan the strip not only to restore economic vitality, but also to implement land use and mobility solutions to reduce reliance on the car and to conserve energy and natural resources. In cases where inner-ring suburbs and neighboring cities are connected by aging commercial strips surrounded by

<sup>6</sup> Beyard, M. and Pawlukiewicz, M. *Ten Principles for Reinventing America's Suburban Strips*. The Urban Land Institute, 2001, p. iv.

more compact, walkable neighborhoods, corridor redevelopment can provide mixed-use centers for expansion of transit; an informal network of new, smaller, parallel streets connecting aging centers with adjacent neighborhoods and with each other; and more workforce and affordable housing.

In summary, the forces of change that produced and bolstered the commercial strip have been eclipsed by new forces of change that undermine the viability of the commercial strip in its present form. Growing demand for mixed-use and energy- and resource-efficient development is accelerating the cycle of change from linear strip retail to people-oriented centers, from spread out to concentrated, and from auto-oriented to walkable and transit-oriented.

#### ***1.4 Revitalization by Restructuring the Strip***

To realign aging commercial strip corridors with the forces of market demand, the strip should be significantly and deliberately restructured into a form which property owners, developers, and communities will once again invest.

The necessary restructuring should be carried out on both sides of the corridor's right-of-way line. For properties lining the corridor, revitalization requires a restructuring of land use and development patterns. A change from auto-oriented to multimodal transportation through and near the corridor can help guide and focus redevelopment, which in turn will enhance mobility through the corridor. The land use pattern and the thoroughfare design should be planned together and reinforce each other. Part Two of this report provides planning and design strategies for these two interrelated components.

Orchestrating strip corridor revitalization requires leadership by local government. Commercial strips are composed of hundreds or even thousands of separate parcels—far too many individually owned properties for any single property owner or developer to substantially influence. Also, with the future of a prominent part of the neighborhood at issue, stakeholder and resident involvement in the re-planning process will be critical to making sure the revitalization meets local needs, to political acceptance, and to implementation. The local government's overarching goal is to provide a credible and reliable development context within which private and public dollars will be invested to create a different type of corridor, from which residents, business owners, the municipality, and other stakeholders can once again derive value. Part Three of this report addresses the challenges, decision-making process, and key policy tools critical to successful corridor revitalization.

## **2. ORCHESTRATING REVITALIZATION: THE CORRIDOR RESTRUCTURING STRATEGY**

Strip corridor revitalization requires two complementary strategies: restructuring the pattern of land use and development lining the corridor and incorporating the redesign of the public right-of-way. These strategies often require a re-tooling of the transportation network to support the restructured development pattern and its role in the regional transportation network. The restructuring of the development pattern and the street redesign should work in concert with one another to stimulate and support new investment. This section presents a step-by-step approach to accomplishing this two-fold task.

### **2.1 RESTRUCTURING LAND USE AND DEVELOPMENT ALONG THE STRIP**

Decisions regarding the positioning of buildings, which way their front entrances face, the uses occupying the structures, the treatment of the spaces between the building and the street, the location of parking facilities, the height and intensity of the development, and the average length of street frontage occupied by a single development, collectively determine the character and performance of a neighborhood. What we call “the strip” is one kind of arrangement. This section provides a practical guide for transforming that pattern to one more aligned with current consumer, investor, and community preferences.

#### **2.1.1 REORGANIZE RETAIL FROM LINEAR TO NODAL**

Since market-driven change in shopping industry development formats is a crucial factor driving change along commercial corridors, revitalization planning should start with a reevaluation of retail development patterns along the corridor. A local government can follow these consecutive steps when re-planning the retail-driven portions of a corridor.

##### **2.1.1.1 Identify the most favorable locations for contemporary (clustered) retail investment.**

The restructuring plan is intended to encourage and accommodate the transformation from linear strip retail to clustered retail at crossroad locations. This requires identifying the most favorable locations along the corridor for retail clusters. A preliminary map of preferred retail locations can be easily prepared by plotting the existing hierarchy of crossroads, from freeway interchange to major at-grade intersection to minor at-grade intersection, and then ranking each crossroads by existing and projected traffic volumes at the intersections (Fig. 15).

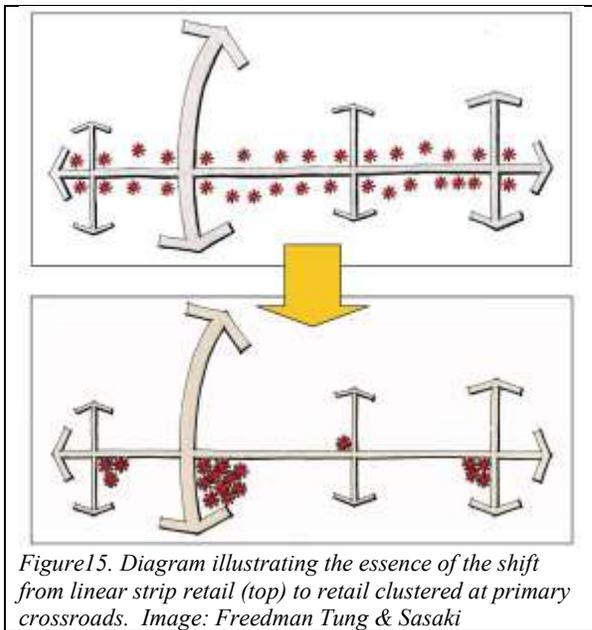


Figure 15. Diagram illustrating the essence of the shift from linear strip retail (top) to retail clustered at primary crossroads. Image: Freedman Tung & Sasaki

If the evening commute home from work is predominately in one direction, then properties along the homeward-bound side of the road (if the corridor features two-way traffic) will be more favorable to shopping center investors. This will be particularly true for smaller, neighborhood-serving clusters anchored by supermarkets.

Another important consideration is the availability of sufficient property for development or redevelopment. A property that is very awkwardly shaped, very shallow, or small and hemmed in by economically stable development (such as occupied and well maintained single-family homes) is not likely a viable

location for a future center, even if it is located at a prominent intersection on the homeward-bound side of the road during the evening commute.

In many instances, the crossroads locations identified as most favorable for retail development will already be occupied by contemporary anchored shopping clusters. Due to the availability of developable property, in some cases new clusters may be close to, but not exactly at, a crossroads location. If these centers are new and quite successful, they should be designated in the plan as official retail center locations. That is, the planning process should not try to force a successful development pattern into a purely theoretical framework.

Taking all of these factors into consideration—the hierarchy of crossroads locations, the direction of the evening commute, the availability of property for investment, and the pattern of existing successful retail concentrations—the planning team can map a hierarchy of the most favorable potential locations for clustered retail development along the corridor. This preliminary pattern for future retail will be refined further once it is examined in the context of existing retail development in the neighborhood and region.

### 2.1.1.2 Identify a potential hierarchy of retail venues.

Unfortunately, the investment in contemporary retail development that is realistic for the corridor is not limited simply by the number and size of potentially favorable sites. It is more severely limited by the number of potential customers for the stores, the eateries, and the services in those developments. To see how many potentially favorable retail locations might be viable (as well as how much retail might be feasible on any of the sites), the planning team should match as many sites as possible with customer populations that are either in place now or that will be in place within the timeframe of the corridor plan. This approach typically requires an economic and market analysis as described in Appendix A.

**Table 1. Hierarchy of Retail Venues**

**Regional centers**

Trade area: a minimum of 150,000 households within 12 to 15 miles of the center.

Location: on an interstate highway interchange that provides a convenient junction between the communities that it serves.

Features: Regional centers are anchored by department stores and increasingly include big-box and superstore retail, including major “category killer” stores. Venues provide comparison-shopping retail, especially for clothing, and specialty goods such as furniture, home improvement, and electronics. A wide assortment of restaurants is part of the standard mix, as are movie theaters and often other entertainment anchors.

**City centers**

Trade area: 5- to 7-mile trade area containing a minimum of 30,000 to 50,000 households.

Location: convenient to the homes in the trade area.

Features: City centers are ideal locations for supermarkets, banks, and pharmacies but incorporate significantly fewer major anchors than regional centers. Many of them are built around civic or cultural anchors, another distinguishing factor from regional shopping centers. Mainstays include restaurants, shops, and entertainment venues oriented to a walkable street. Shops can offer a wide range of goods.

**Neighborhood centers**

Trade area: at least 5,000 to 8,000 households.

Location: serve a collection of neighborhoods located within 1 or 2 miles of the center.

Features: Neighborhood centers located on particularly busy thoroughfares can make up for the lack of nearby homes by also catering to passing motorists. Currently, the most widely accepted format for a neighborhood retail center is anchored by a supermarket of up to 65,000 square feet with a pharmacy positioned at the opposite end and smaller shops and services in between.<sup>7</sup>

**Corner stores** occupy the smallest niche between the neighborhood centers within walking distance of homes too far from the nearest supermarket-anchored center or at intersections with sufficient drive-by traffic.

Retail venues, summarized in Table 1, are defined by the trade areas, or target customer populations, that they serve. The target market of each center determines the appropriate types and mix of retail and services in the development.

Planning and regulation for the retail-driven centers designated by a corridor restructuring plan should create a hierarchy of shopping center formats that shopping industry investors will recognize. Working with these classifications is important to anchor a restructuring plan in the realities of the retailing world. The Urban Land Institute (ULI)<sup>8</sup> and International Council of Shopping Centers (ICSC)<sup>9</sup> publish a list of shopping center classifications. The industry classifications fall roughly into four categories—regional centers, city centers, neighborhood centers, and corner stores.<sup>10</sup>

In the preliminary selection of the sites most favorable for clustered retail development, the largest crossroad locations—the major freeway interchanges that are often at the outer edges of cities—are potential regional centers; the primary crossroad locations closer to the geographical center of the community are more likely

<sup>7</sup> Leinberger, C. *The Option of Urbanism*. Island Press, 2008, p. 52.

<sup>8</sup> Kramer, A., *Dollars and Cents of Shopping Centers/The Score 2006: A Study of Receipts and Expenses Shopping Center Operations*, The Urban Land Institute, 2006, pp. 5-6.

<sup>9</sup> ICSC, “ICSC Shopping Center Definitions: Basic Configurations and Types for the United States.” <http://www.icsc.org/srch/lib/USDefinitions.pdf>, 2004.

<sup>10</sup> These are not the precise terms used by ICSC or ULI, nor are they the only types; they are the primary categories into which most shopping center types fall.

potential city centers; and the sites at secondary but still highly visible crossroads are potential neighborhood centers or corner stores (Fig. 16). Once these locations are identified, matching sites with available customer populations will begin to narrow down the number of sites that are viable for retail development.

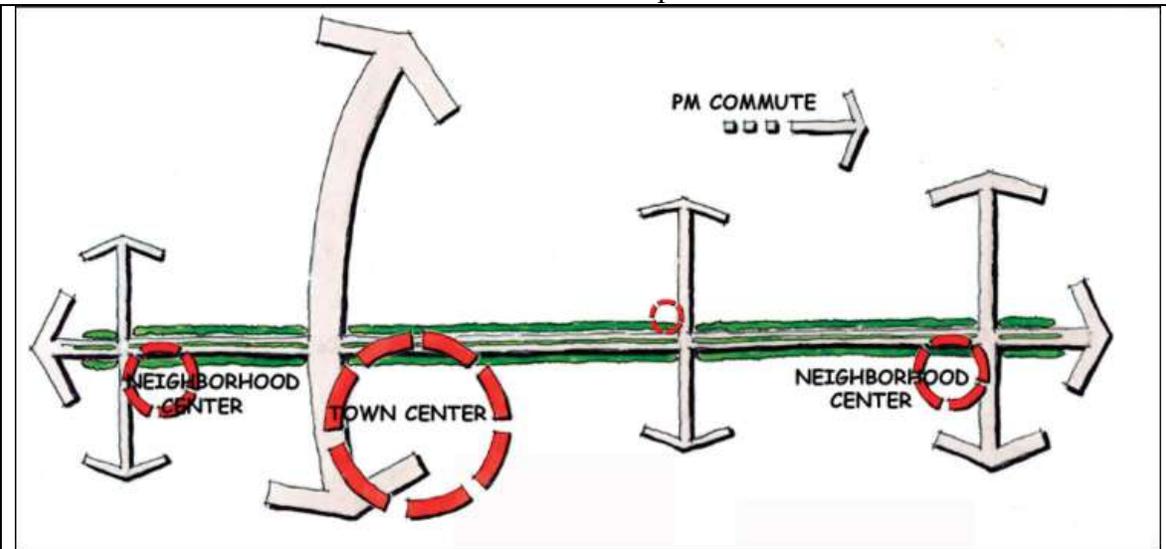
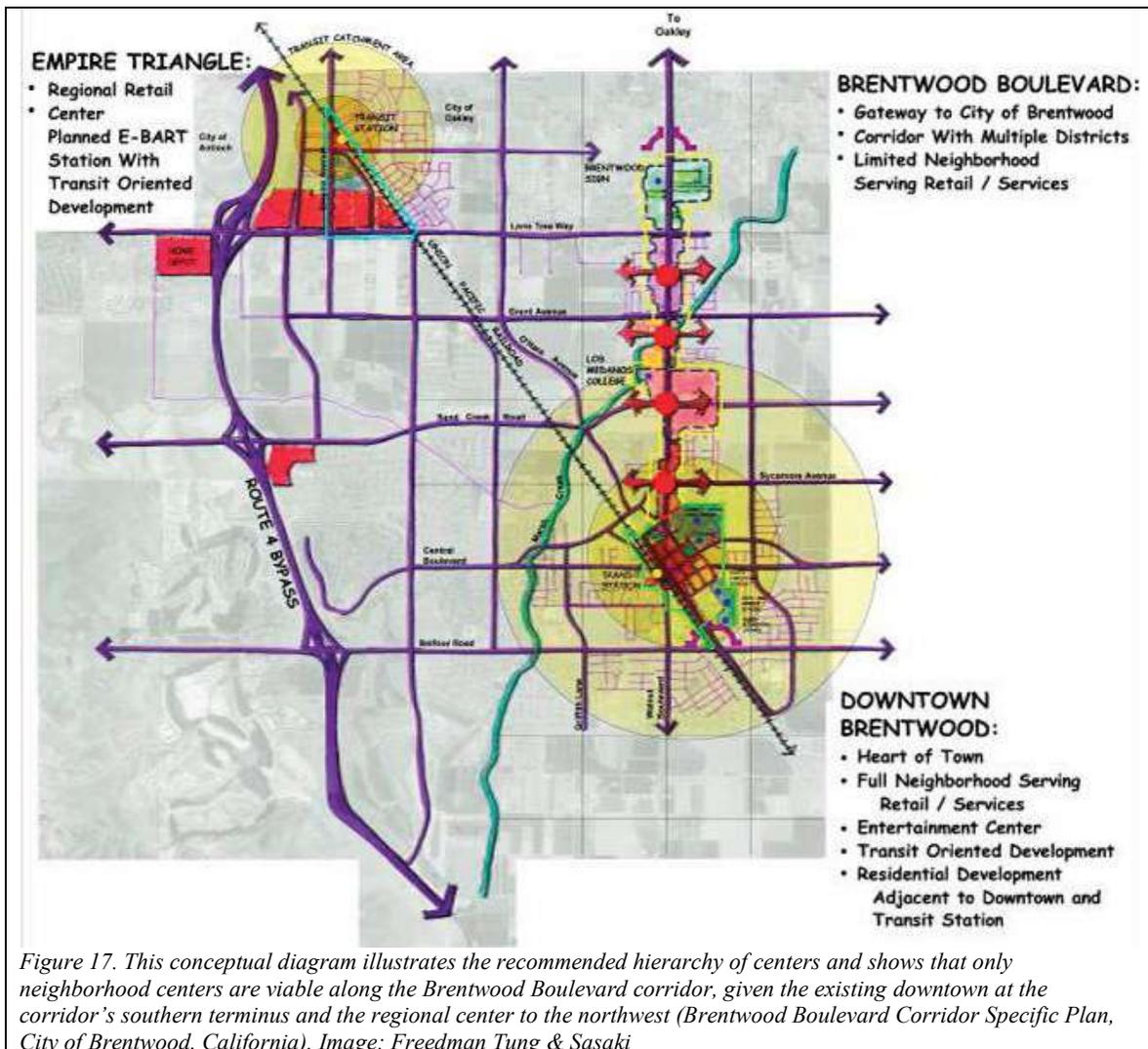


Figure 16. Retail clusters are matched with their corresponding trade areas, resulting in a hierarchy of retail development types corresponding to the ranked hierarchy of crossroads locations. Image: Freedman Tung & Sasaki

### 2.1.1.3 Plan corridor retail as part of a supportable local and regional framework.

To determine the optimum supportable pattern for retail along the corridor, the planning team will assess the relative position of the corridor—all its best crossroad locations and the associated properties—within the overall spectrum of retail development locally and regionally. This is critical. Although every region will have a regional center and every city with at least 30,000 households can support a city center (or a city center shared with a neighboring city), not every city and regional center will be on the corridor that the plan is focused on.

A review of the pattern of successful, existing regional and local centers provides an essential piece of the puzzle in planning corridor retail to fit within a supportable framework of local and regional retail development (the inventory and mapping of these centers are part of the Existing Conditions Inventory described in Appendix A). The presence of successful, well-located, competing centers within the trade area, even if they are not actually on the corridor, will likely be a major constraint on the number and type of retail-driven centers that are viable on corridor properties. For example, the city of Huntington Beach, California, determined through a corridor restructuring plan that the trade area being studied could support three city centers, but that one was already present—downtown Huntington Beach—and not on the corridor, meaning that only two new centers would be viable along the corridor. A study of an emerging corridor in the city of Brentwood, California, found the corridor could support a range of neighborhood shopping centers, but not any new city or regional centers, because it was between a historic downtown to the south and a new regional center rapidly growing along the northern edge of the city (Fig. 17).



Since metropolitan regions are crisscrossed with an overabundance of competing commercial corridors which effectively dilutes investment, and since commercial corridors typically traverse municipal boundaries, the future pattern of local and regional centers is best planned at the regional scale.

The completion of these three tasks—identifying the most favorable sites for clustered commercial space along the corridor, defining a hierarchy of potential centers by matching cluster size and mix to trade area, and planning the hierarchy of retail clusters as part of a supportable city and regional framework—will enable the preparation of a diagram designating a supportable framework of retail-driven centers for the corridor (Fig. 18).

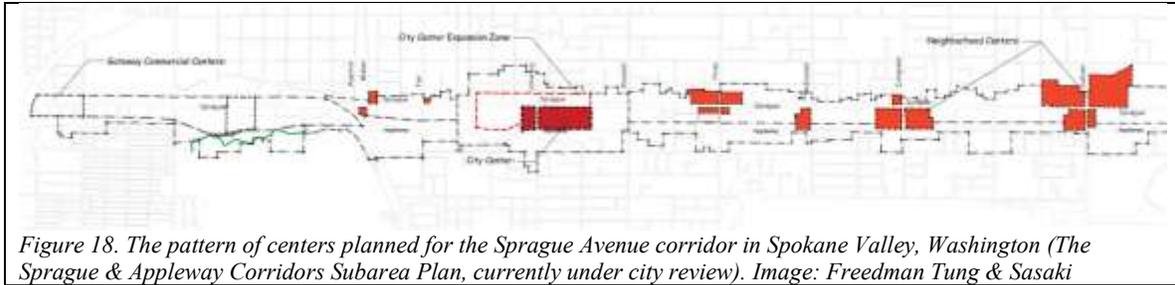


Figure 18. The pattern of centers planned for the Sprague Avenue corridor in Spokane Valley, Washington (*The Sprague & Appleway Corridors Subarea Plan*, currently under city review). Image: Freedman Tung & Sasaki

How much of this pattern is already on the ground and how quickly the planned development might emerge will vary from corridor to corridor. But in many cases, the pattern of retail centers sets up the corridor restructuring framework. It overlays the failing linear strip with a pattern that distinguishes retail-driven centers from the long portions of corridor frontage between the centers.

### 2.1.2 CREATE REAL CENTERS

Although it is possible to produce successful shopping centers clustered at crossroad sites with auto-oriented, low-density, single-use, superblock development, this pattern is however unlikely to create a framework for lasting value.

- There is growing evidence that we have too much single-use, auto-oriented housing, shopping, and employment development, whereas there is substantial, verifiable pent-up market demand for what Christopher Leinberger has labeled “walkable urbanism”—compact, mixed-use, pedestrian-oriented districts served by transit. Single-use, surface-parked “lifestyle centers” that visually mimic historic main streets but are in isolated locations along arterials remain “drivable suburbia” and are likely to lose value sooner or later to walkable urban alternatives, unless they are redeveloped as mixed-use, walkable, transit-oriented centers with housing (and customers) replacing the surrounding surface parking lots.<sup>11</sup>
- A segment of employees, the so-called “creative class,”<sup>12</sup> prefer environments that feature what Doug Henton has termed “vital centers of regions, towns, and neighborhoods:”

Creativity is encouraged by work and living environments that allow for a lot of interaction among people. . . . The proximity, density, and publicness of vital centers stimulate interaction among people. Vital centers are typically filled with the kinds of places conducive to planned meetings as well as chance encounters.<sup>13</sup>

Cities and regions will increasingly try to foster the innovation and creativity that have become the primary value generators of the global economy. This will lead

<sup>11</sup> Leinberger, C. *The Option of Urbanism*. Island Press, 2008.

<sup>12</sup> Florida, R. *The Creative Class*. Basic Books, 2002.

<sup>13</sup> Henton, D. and Walesh, K., *Linking the New Economy to the Livable Community*. The James Irvine Foundation, 1998, p. 16.

policy makers interested in economic development to value and promote compact agglomerations of workplaces, homes, services, and activity.<sup>14</sup>

- Political pressures to address global warming, energy inefficiency, and traffic congestion are encouraging metropolitan regions to build and extend transit services and to plan new development that can take advantage of transit infrastructure.<sup>15</sup> Low-density communities present challenges for public transit. Effective public transit relies on a pattern of centers with density, activity, and mixed land uses at transit stops, along with safe, walkable streets connecting to the surrounding ridership base.

The market, social, and political forces driving change will not be satisfied by merely reorganizing strip retail into shopping centers at large intersections. For communities to derive maximum benefit from the restructuring of the corridor, and for developers and property owners to invest in types that appeal to today's consumer, corridor restructuring efforts must place priority on assembling the conditions that foster diversity, synergy, and activity. Below are some key strategies to accomplish this goal.

#### **2.1.2.1 Provide a development framework that fosters a healthy mix of uses.**

The primary characteristics of real centers are activity, synergy, and mix. The greater the number of uses, the more reasons people will have to frequent the district over the course of a day. Corridor restructuring plans should employ planning tools such as mixed-use zoning ordinances to foster the development of both activity-generating uses and a local customer base for those uses.

Retail, food service, and entertainment venues are primary activity-generating uses, the key ingredients for street life and urban vitality. Ground-level retail should be required for buildings in centers' core activity zones.

A wide range of homes and workplaces (in sufficient density, which will be discussed in Section 2.1.3) above and close to a ground-level base of activity-generating uses is critical to supporting the retail and services. In most communities, development policies should require buildings in the core (the ones with ground-floor shops) to be mixed use and should promote housing, office, live-work, lodging, light industrial, and manufacturing along adjacent blocks. In lower density suburban neighborhoods, the densest housing should surround the clustered commercial buildings.

The widest possible diversity of shops, residences, and workplaces (especially those that employ large numbers of employees per square foot) should be encouraged. To that end, plans for centers on sites with existing, older buildings in good structural condition should include provisions to retain a mix of such structures to supply more affordable locations for shops, homes, and offices. This range of affordability is vital to create a

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<sup>14</sup> Contemporary publications such as those by Henton and Florida illuminate the connection between urban vitality and innovation, and they echo Jane Jacobs' pioneering work on this issue in *The Economy of Cities* and in *Cities and the Wealth of Nations*.

<sup>15</sup> Dittmar, H. and Ohland, G., ed., *The New Transit Town*. Island Press, 2004.

district that can incubate and support the distinctive businesses, shops, and services that do so much to distinguish a thriving urban district.

### **2.1.2.2 Foster high concentrations of land use intensity in centers.**

Real centers concentrate activity by virtue of the density of their mix of uses. More than anything else, the greater development intensity of centers makes them easy to distinguish from other parts of the city or suburb. They should be visibly taller, denser, and busier—the most urban places in the region. Policies conditioning development in centers should require greater lot coverage, smaller setbacks from the street, and greater height, which will engage more people. Such policies should include *minimum* intensities and/or building heights and *maximum* parking provisions, as well as prohibiting private surface parking lots in centers. While the particular heights or densities will vary depending on the location in the region and on center type, even the smallest neighborhood center should ultimately display much more activity than its surroundings, while the regional center should be characterized by greater intensity than anything for miles around.<sup>16</sup>

### **2.1.2.3 Organize buildings and the spaces between them to cultivate street life.**

The concentrations of shops, homes, and workplaces that bring us to centers must be physically arranged to entice us out into the public spaces between the buildings. The buildings should define and open onto public streets, and the streets and street network should be designed to make walking, sitting, chatting, and meeting a pleasure. Some ways to design centers to encourage street life include:

*Orient buildings to activate streets.* To create active street life, the buildings that house ground-level shops, cafes, restaurants, and community services should define and activate inviting pedestrian-oriented streets, plazas, and town squares—spaces to linger when the weather is fine. Public sidewalks lined by shops, buildings with large display windows, frequently placed doors, and human-scaled signs add interest and distinguish the street. These features can be designed in many different ways, but they are the ones that consistently make a center’s streets successful.

*Provide a central focus.* The “center of the center” demands some sort of centerpiece or focal place. Frequently, this is a formal public space such as a town square or plaza, or it might be designed along the lines of a traditional downtown “Main Street.” A central main street with curbside parking, a steady stream of slow-moving traffic, and always-available views into appealing shops and restaurants.

*Design streets around pedestrian comfort.* All streets in the center should feature generous sidewalks and amenities. In the core shopping and eating area, sidewalks should be wide enough to accommodate outdoor dining. Internal streets should contain no more than two through-lanes, with curbside parking on both sides. Buildings should be built

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<sup>16</sup> The Urban Land Institute describes this approach as “Pulse Nodes of Development” – see Michael D. Beyard and Michel Pawlukiewicz, *Ten Principles for Reinventing America’s Suburban Strips*. The Urban Land Institute, 2001, pp. 10-11.

right up to the sidewalks with doors and windows facing the street. Along segments of the corridor that have more than two lanes, additional design features will be required to ensure pedestrian comfort; the design of the corridor frontage is discussed later in this report.

*Provide a network of small blocks.* A pattern of small blocks with street alignments connecting to surrounding neighborhoods is critical to pedestrian activity. Small blocks shorten walking distances between the uses and destinations in the district; large ones discourage walking and create barriers between customers and the shops that they would otherwise frequent. Corridor restructuring efforts will often result in the redevelopment of large parcels along the corridor, particularly as existing centers intensify and newly designated ones emerge. This redevelopment is an important opportunity to convert superblocks into smaller ones, which can divert trips to and from corridor destinations off the arterial and onto new alternative routes. Redeveloping strip corridor shopping centers offers the potential for these sites to be transformed from impervious “superblocks” to urban center districts with new through-routes. The finer “grain” (smaller blocks) and increased street frontages on the internal through-routes of these centers create more walkable setting for new buildings and public open spaces (Figs. 19 and 20).

*Locate parking to support walking.* For visitors who drive to the center, a park-once-and-walk experience should be the most appealing and practical way to visit. Where surface parking is required for development feasibility, surface lots should be to the rear of primary building frontages and configured to allow their conversion to structured parking as land values rise and development intensity increases.

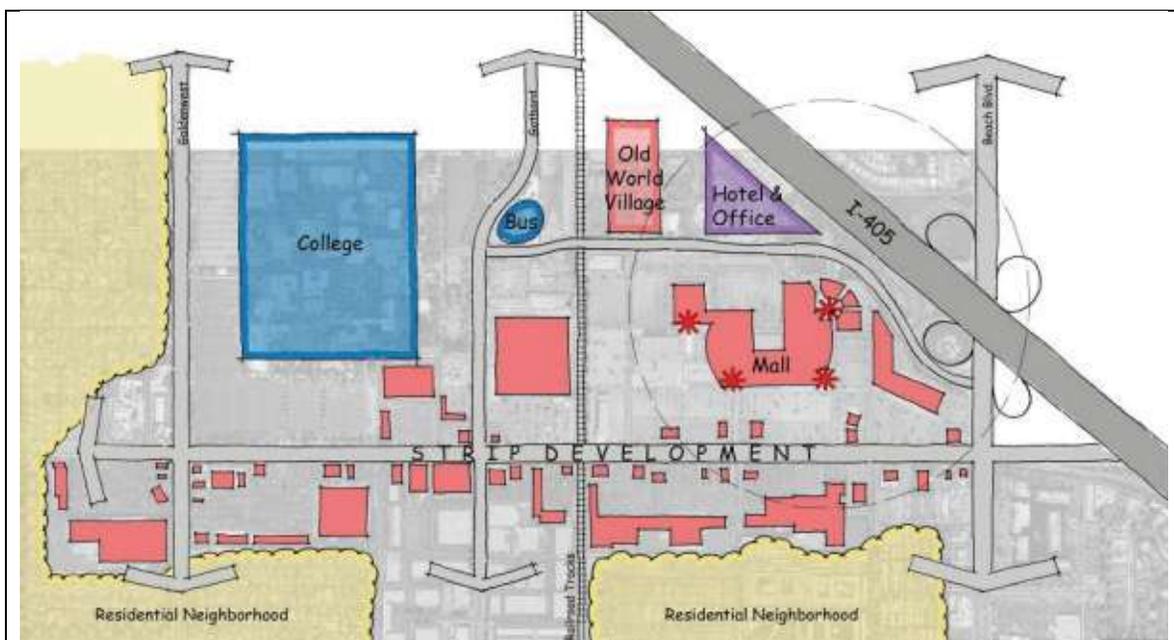
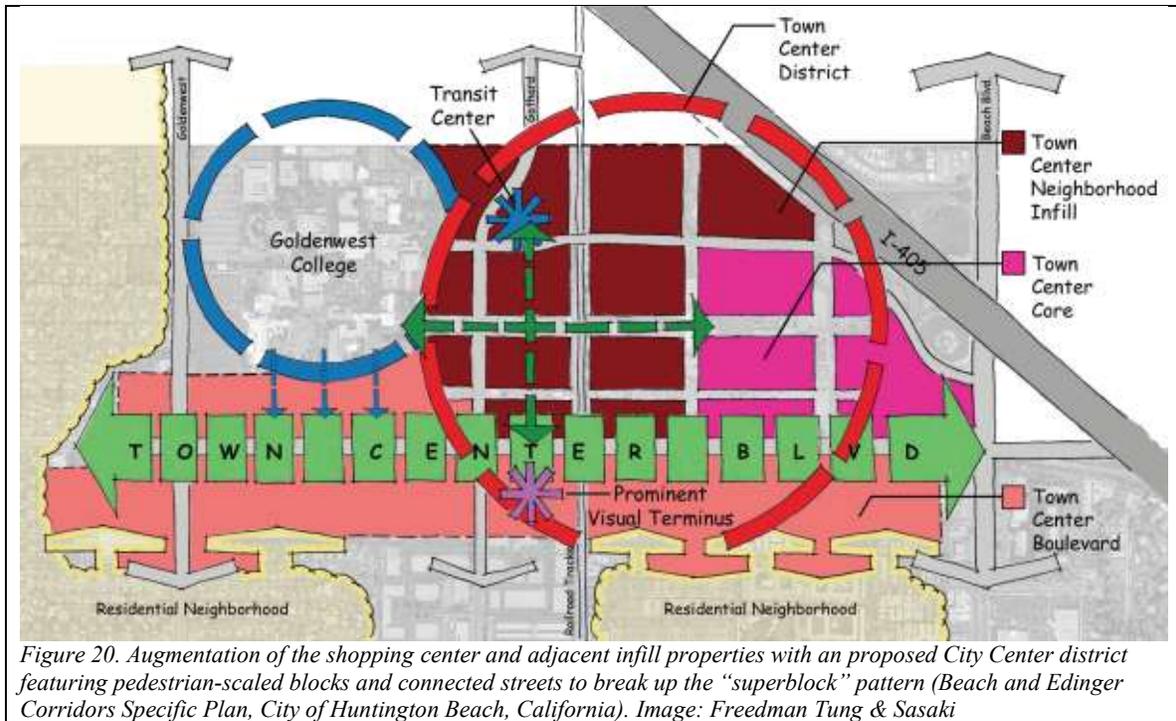


Figure 19. Existing development pattern at and around Bella Terra Mall in Huntington Beach, California. Most buildings are set back from streets behind large parking lots, existing streets and blocks have low connectivity, and the “front door” of the area is a conventional strip (Beach and Edinger Corridors Specific Plan, City of Huntington Beach, California). Image: Freedman Tung & Sasaki



#### 2.1.2.4 Avoid bisecting the district with arterial roadways.

The easiest mistake to make in re-planning commercial corridors is to plan retail concentrations on all four corners of a large intersection and label the intersection a “center” on the restructuring plan. Intersections offering sufficient visibility to host a city or regional center will usually feature many through lanes and turning lanes, resulting in very wide or unsafe crossing distances and making it seem like the stores on each corner are separate destinations. Alternative strategies for locating walkable centers along commercial arterial corridors include:

*Locate the center on one quadrant of the intersection.* Where a center is planned along a conventional arterial roadway, select one—and only one—of the four intersection quadrants to house the future center (Fig. 21). The arterial will then run along two edges of the center, providing visibility and access, but will not bisect the district. In most cases, the center will be sited on one of the two quadrants on the going-home side of the arterial, as explained in Section 2.1.1. If an existing, planned, or potential station along a regional transit network is or could be located in a particular

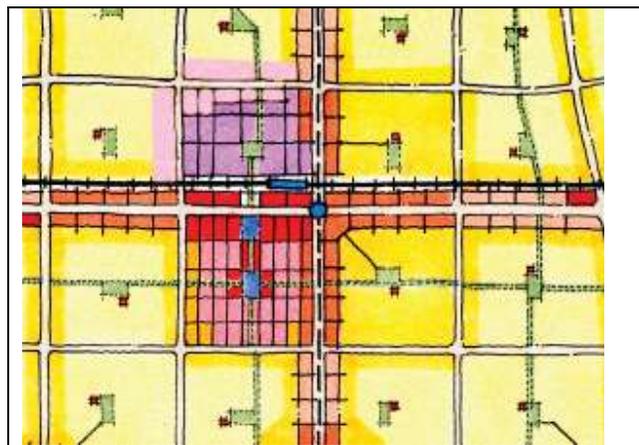


Figure 21. Conceptual diagram of a retail center (in red) located at one of the four quadrants of an arterial intersection. Image: Freedman Tung & Sasaki

quadrant, that quadrant should be selected since it will be significantly more attractive to office and residential investment than the others. Picking a single quadrant for a new city center will often be the only viable option for most built-out suburban communities.

*Slow and narrow through-traffic within the center.* Build the center on all four quadrants of the intersection, and redesign the street through the center to feature wide sidewalks and curbside parking, which will help calm traffic. Convert the excess width of the roadway either by narrowing the right-of-way, building head-in parking along the curbs, or providing a linear pedestrian green in the center. This option sacrifices through-traffic capacity (it creates a “bottleneck” in the arterial) in favor of a better shopping experience for the pedestrians that can lead to improved economic development in the center.

*Redesign the corridor as a multiway boulevard.* Redesign the portion of the arterial running along the center in the form of a multiway boulevard, locating the center on one or both of its sides. The multiway boulevard is particularly effective because it combines relatively high traffic volumes with pedestrian comfort. The sidebar on page 32 provides a detailed description of this option. A boulevard can also include tight, urban-scaled, grade-separated intersections to maintain traffic flow while connecting both sides of the corridor.

*Configure the arterial as a one-way couplet within the center.* When planning the central district for a new city or town, plan the town center at a specially configured intersection of two arterials. Just outside the center, split the arterial into a one-way couplet spaced by one walkable block (approximately 300 feet wide). The key to success is to limit the width of each of the one-way through-streets to not more than two through-lanes with curbside parking on both sides of the street—these street environments are easy to cross and comfortable to walk along and would not create edges to the central district, but would provide the best streets for storefronts and activity. The couplets rejoin once they are past the center. This model was developed by Peter Calthorpe<sup>17</sup> and has been applied by Calthorpe Associates at San Elijo Hills Village in San Marcos, California (Fig. 22). This configuration is typically less feasible for built-out areas because of the stable, single-family homes behind the commercial frontage lining the arterial.

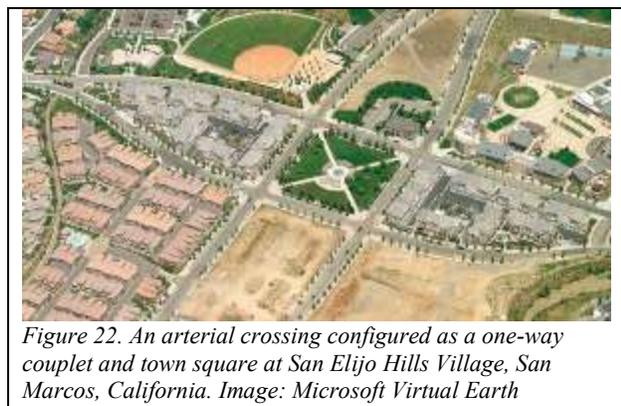


Figure 22. An arterial crossing configured as a one-way couplet and town square at San Elijo Hills Village, San Marcos, California. Image: Microsoft Virtual Earth

### 2.1.2.5 Enhance transit potential.

Centers become centers precisely by becoming the most vital, active, and accessible places in a community. In typical suburban locations, a strategic location on the regional highway and arterial network is essential to center size, mix, and success. But centers’

<sup>17</sup> Calthorpe, P. “The Urban Network: A Radical Proposal,” *Planning Magazine*. May, 2002.

viability will come depend more on their accessibility to growing regional transit networks.

Planning active centers along with improved regional transit service will ensure that transit plays a more significant role in regional mobility. Focusing centers on transit stations also expands the trade area to the broader region. In addition, the center will need to be easy to reach by any and all modes—private automobiles, transit, walking, and bicycling. Corridor restructuring plans should take every opportunity to enhance the center’s role as a primary node in a multimodal transportation network.

Neighborhood centers and city centers should be easy-to-walk-to destinations for a good share of their trade areas. Properly located neighborhood centers (at the center of their 1- to 2-mile trade area) can be a 10-minute walk for up to half of their customers. The full neighborhood center trade area should be accessible to bicyclists as well.

#### **2.1.2.6 Locate civic buildings in centers.**

Civic buildings add diversity to the mix of uses and broaden the times of day that people have reason to frequent the center. Civic buildings can also provide authenticity and meaning as iconic symbols for neighborhoods, cities, and regions. This quality is best illustrated by traditional urban centers, where courthouse squares, parks, and public plazas offer places to gather, rest, host community events, and enhance buildings. Including such places in centers —especially if they have genuine community functions—is one strategy to differentiate real centers from shopping developments.

### **2.1.3 RESTORE VALUE AND PROMINENCE TO SEGMENTS**

Organizing retail development into a clear pattern of centers brings the corridor segments—the long portions of corridor between centers—into sharp focus. Whereas many crossroads-located properties have become increasingly valuable for retail-driven investment, the properties along the segments in between continue to lose value. Corridor segments are typically several miles long and can be composed of hundreds of separately owned parcels of varying sizes. These properties may have already been hurt by retail investors’ abandonment of the strip format along many corridors. They are the portions of the strip where disinvestment—or the threat of disinvestment—is most severe.

This section provides strategies to restore the corridor’s identity as a prominent address. Strategies for aging corridor segments complement, and are supported by, the strategies for the centers described in Section 2.1.2. As with centers, restoring value along the segments involves realigning the pattern of land use development along corridor-fronting properties with contemporary demand and with the principles of sustainable community design.

#### **2.1.3.1 Identify alternative value for segments.**

To provide an effective planning framework that will stimulate investment in the long corridor segments no longer being used for retail, corridor plans must enable viable alternatives to strip retail and shopping centers. In some strip segments, this can be done

by building on strong commercial assets already in place; in others it will mean identifying and promoting new uses and development types that can restore value to segment properties.

*Reinforce and build on value already in place.* The first place to look for sources of value for the segments is along the corridor itself. The inventory of assets conducted at the outset of the planning process will have identified those areas experiencing existing and “creeping” disinvestment, as well as assets in place that are doing well. In many instances, some corridor segments will have stable or prospering commercial uses, such as clusters of specialized auto-accessed retail uses (such as auto dealerships), clusters of non-retail uses (such as lodging, medical uses, offices, or constellations of light manufacturing, assembly, and distribution), or retail and service businesses that do not cluster (such as institutional uses like schools and medical facilities or retail uses that need a lot of land but are relatively unsuited to pedestrian-oriented retail centers, such as nurseries or stores selling construction materials). Where assets like these are stable and in place, the plan should bolster and extend their market draw by promoting investment in similar or complementary uses on nearby properties. As described in Section II, street improvements can support such policy initiatives by providing an environment that is keyed to the market focus of a corridor segment.

*Enable residential investment as the most viable and predominant alternate use for segments experiencing disinvestment.* For segments without a strong existing commercial focus, housing will almost always be the most promising ingredient for future value. The same market preferences driving the surge in demand for compact, walkable, mixed-use centers are driving demand for a wider range of housing types.<sup>18</sup> Older strips across the United States are a vast supply of underused land that can be made available to meet much of that demand.

Even heavily disinvested segments far from the primary freeway off-ramps and major intersections often run along the edges of residential neighborhoods of considerable economic stability and value. In the post-strip suburban city, it is easier for corridor frontages to attract value by integrating with the neighborhoods they border than by trying to compete with far-away crossroads properties for shoppers and retail investors.

In most suburban neighborhoods, strip corridors cut abruptly through what is otherwise exclusively residential neighborhoods. Restructuring these corridors with new housing not only captures value for corridor property owners, it also improves the neighborhoods that flank the corridor. It replaces uses and development types that *conflict* with neighborhood character with uses and development types that *complete* the neighborhood along its natural boundary—the wide road itself rather than the back property line of businesses along the road (Fig. 23). Re-making the corridor to put housing on frontage parcels is an opportunity to “finish” the residential neighborhood—to transform it from a place that ends with dumpsters to one that is bounded by housing and punctuated by the neighborhood centers discussed in Section 2.1.2. Residents in strip corridor-abutting neighborhoods would typically support a plan that would reduce or eliminate noise, odor,

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<sup>18</sup> Leinberger, C. “The Next Slum?” *The Atlantic*. March, 2008.

and privacy impacts of strip development by replacing it with properly designed housing (Fig. 24).



Figure 23. The backyard fence between the neighborhood and strip commercial is often a thin divider between the home and trash containers, parking lots, and their bright lights. Image: Microsoft Virtual Earth.



Figure 24. Sketch of infill corridor housing to replace aging strip retail, illustrating properly scaled residential development providing an identity and an edge for the neighborhood along the wide road, and stepping down toward the rear for compatibility with the existing housing. (80 to 80 corridor Revitalization Plan, City of Fairfield, California). Image: Freedman Tung & Sasaki

Residential development along corridors also typically supports larger municipal or regional objectives that are tied to longer-term market trends. Accommodating housing in mature urban areas and highly accessible portions of newly developing communities is in line with regional smart growth strategies. The shock of unprecedentedly high gasoline prices in 2008 emphasized the importance of these strategies, as people became increasingly attuned to the time and money they could save by choosing to live closer to their workplaces or to transit instead of enduring long, congested, and costly driving commutes from homes in exurban locations.

### 2.1.3.2 Extend residential entitlements to most properties along the corridor.

To re-enable the highest and best use for the corridor as a whole, municipal zoning needs to be rewritten to reflect the varied potentials of centers and segments. Municipal land use and development policies put into place during the heyday of the strip were written when the highest and best use was the same for the crossroads as it was for the segments between them. Now that retail investors are passing over properties that are not well located, typical commercial-only strip zoning leaves property owners in segments with limited use options and thus often is a barrier to reinvestment.

To restore value to older segments, residential entitlements should be extended to all or most corridor properties. One option for making this change is to add residential use to those permitted along the corridor. A more effective approach is to *replace* underperforming retail entitlements with residential entitlements in segments that are well suited for housing, providing complementary market support for both centers and segments. Replacement with, rather than addition of, residential entitlements provides

greater incentive for desired change. If the full range of retail entitlements remains in place, property owners may be tempted to hold their properties in anticipation of a hoped-for future retail development that they believe to be more lucrative.

*Accommodate a wide range of housing types and price points.* Relatively strict adherence to development ordinances that specify the physical requirements of housing will ensure that the segment will look attractive. These ordinances should permit a wide range of housing types, including large single-family homes, duplexes, attached or stacked townhomes, courtyard housing, and flats. Communities can use these development standards to open up the potential of wider roads to provide more housing types, accommodating a variety of incomes and family structures.

*Accommodate a wide range of uses within segments where residential development is planned to be the likely dominant use.* Compatibility of building types is the key to mixing uses and to the success of segments. Building type compatibility can only be ensured by establishing and enforcing a development code that offers flexibility of use but is quite specific with regard to physical form (the opposite of most strip zoning codes). The development code must establish the characteristics and positioning of building types to ensure that all permitted uses are good neighbors to each other and particularly to a potential residential development. The same setbacks, building orientation, buffering devices, and architectural consistency required for corridor-fronting housing must be applied to office, lodging, live-work, and permitted commercial uses within the segment.

### **2.1.3.3 Permit a range of investment along the segment.**

Corridor plans should avoid determining which use will replace disinvesting properties in any given segment. Instead, plans should accommodate the widest possible spectrum of uses, especially non-retail uses, in segments and provide a policy framework that ensures that the various uses will combine gracefully.

*Adjust the planning framework to support and enhance segments likely to retain commercial specialization.* In addition to clustered retail and high-density development in centers and in residential and mixed-use segments, restructured corridors will also frequently feature segments with neither shopping nor residential focus, such as employment districts straddling segments, segments specializing in auto sales, and segments featuring large and diversified medical services and health care, probably clustered around a major hospital. As with the residential segments, each of these segments will have a range of frontage characteristics that are configured to support the predominant use and create a distinctive and unified segment identity. Similarly, where the rear property lines of these non-residential uses transition to homes, they will need proper buffering that includes height and orientation of buildings and spaces. These relationships must be addressed in the development code.



Figure 25. Rendering of a workplace district master plan concept for East Palo Alto, California, where the workplace district straddles the arterial road and positions its “front door” visibility and amenity on the corridor, but has most of its workplace buildings extending several blocks off the corridor on either side (The East Palo Alto Revitalization Plan, City of East Palo Alto, California).  
Image: Freedman Tung & Sasaki

*Workplace segments.* A typical model for a workplace segment is one that extends back from the corridor, with the properties fronting the corridor forming the “front door” of the district. In this situation, the corridor segment is designed for high visibility and strengthens its local and regional identity, even if workers and visitors are heading to destinations located a block or more off the arterial itself (Figs. 25 - 27).



Figures 26 and 27. Two views of Plumas Boulevard, the town square, and workplace buildings built according to the development code (Central City Specific Plan And Revitalization Strategy, City Of Yuba City, California).  
Image: Freedman Tung & Sasaki

*Auto row segments.* Many corridors have segments dominated by auto sales and services. In some cases, these are well-established businesses that contribute significantly to the municipality’s tax revenues, and where large-site dealerships are contiguous, they can create recognizable “auto rows.” In other locations, repair shops, gas stations, and other commercial strip uses are interspersed between dealerships; space for expansion may also be limited. The advent of assembled and clustered auto mall sites may pose significant competition to auto row segments, just as clustered retail has affected corridor segment retail. If the intent is to retain and strengthen the auto row segment, unifying and upgrading the physical character of the segment is an important means of strengthening regional recognition (Fig. 28).



*Figure 28. Auto Row on Broadway in Oakland, California, where the city has applied a recognizable streetscape and enhanced frontage treatments to auto dealership sites for a strengthened segment identity. Image: Freedman Tung & Sasaki*

In sum, planning the replacement of aging strip retail along corridor segments is much more than a simple change in use. It is a change in structure that integrates with and completes the surrounding neighborhoods. Instead of low-rise buildings in the middle of parking lots, there are multistory buildings with attractive facades and front-yard landscaping to be admired by passersby on the wide thoroughfare. What makes the replacement development so effective are the features that make the segment a boulevard, as much as if not more than the change in use. And without the structural change, residential use is particularly unlikely to be viable—living along a boulevard is more appealing than living along a strip.

To orchestrate and promote this essential structural change, development regulations should undergo a parallel change in structure. Instead of being organized by use, they should be organized by center and segment, with regulations that enforce the necessary anatomy of segments and centers, of which use forms only a small part. Part Three contains an overview of the application of development codes that orchestrate the necessary change in structure that lies at the heart of restoring lasting corridor value.

## **2.2 RESTRUCTURING THE RIGHT-OF-WAY**

Whereas planners and engineers think of the public right-of-way and the properties lining the corridor as separate design and planning elements, people using the strip perceive the corridor's buildings, parking lots, and street space as “the strip”—a singular item with distinctly recognizable features. Discrete attempts at improvement—changing the design of some buildings, adding trees in the parking lots, hanging banners on the streetlights, or putting bricks or flowers in the medians—are usually too small to change the overall picture. To change how investors and users perceive and respond to the strip requires not only a comprehensive reorganization of the type, placement, and orientation of development, as discussed in Section 2.1, but also a corresponding reconfiguration of the sidewalks, street furnishings, landscaping, and lane configurations that collectively shape the form and character of the street space.

This section proposes a more integrated paradigm in which planning and operations for the right-of-way give equal priority to all of the mobility functions of the street and to its role in creating a setting that supports attractive, walkable development.<sup>19</sup>

### **2.2.1 DESIGN TO PROMOTE AND SUPPORT NEW DEVELOPMENT**

#### **2.2.1.1 Provide settings that work well with intended new forms of development.**

The size and character of the street has enormous influence over the quality of the built environment. Successful real estate development is designed to respond to and reinforce the speed, scale, sidewalk environment, and visual character of the street environments they front. To restore value to older strip corridors, the restructured pattern of land use should be paired with a capital improvement plan that redesigns the corridor's right-of-way to create a setting that supports the desired types of new development.

A treeless corridor, for instance, makes ground-floor retail and residential uses less attractive (Fig. 29), while continuous street tree planting increases the corridor's appeal and buffers pedestrians and residences from traffic (Fig. 30). On-street parking is also an effective buffer between pedestrians and traffic while providing convenient parking or at least the “look” of convenient parking to shops and services.

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<sup>19</sup> Context-sensitive solutions (CSS, also referred to as context-sensitive design) use roadway design to meet specific community objectives for development. In terms of corridor restructuring, this means that the physical design of the right-of-way is configured to fit the character and design of each corridor segment and center identified in the restructuring plan.



*Figure 29. In the 1980s, East 14th Street (CA-185) in San Leandro, California, was a conventional four-lane strip corridor arterial that prioritized driving, with no bicycle lanes and few pedestrian amenities. It reflected poorly on the high-quality residential neighborhoods just behind the corridor. Image: Freedman Tung & Sasaki*



*Figure 30. Today, this segment of East 14th Street has been restriped for three vehicle lanes and bicycle lanes in each direction. A continuous tree planting between the sidewalk and curb makes walking more comfortable and dramatically increases the corridor's appeal for mixed-use development. This was a capital improvement recommended in the North Area Specific Plan and Revitalization Manual, City of San Leandro, California. Image: Freedman Tung & Sasaki*

Traffic design controls such as design speed and sight distances should also be matched to the desired corridor character. When re-engineering the street, the local government should select geometric design characteristics such, as lane widths and turning radii, and design controls to create a street that operates in the best way for its settings. This means coordinating the street's physical design and its operating speeds to make vehicles' speeds match the desired types of activity along the street. For instance, where curbside parking is desired (as is typically the case along most segments with fronting retail or residential use), the design speed should not exceed 35 miles per hour.

### **2.2.1.2 Design public and private frontages as a single, cohesive physical element.**

With space along wide thoroughfares always at a premium, it is critical that the area between the buildings and moving lanes of traffic be used effectively. This space is made up of two zones one either side of the right-of-way line—the private frontage including the ground level of the building façade and the design of any setback areas and the public frontage including the sidewalk, parkway landscaping, and parking lanes (Fig. 31). It is absolutely critical that the design of these two zones mutually reinforce each other by working as a coherent visual and functional space. This is especially important along wide thoroughfares which need to effectively buffer pedestrian activity and front entrances from heavily trafficked segments of the corridor. Providing a planting strip between the sidewalk and the curb that is generous and green, lined with street trees and streetlights, and additionally buffered from the moving traffic by a lane of curbside parking can be highly effective.

Creating desirable living environments along strip corridors can be a challenge, since residential development has not always been perceived as compatible with wide roads. Examples of corridor housing poorly configured for arterial road locations have created lasting negative impressions for both investors and prospective residents.

Inappropriately planned and designed developments often present unattractive, “fortified” buildings coupled with barren streetscapes when they face the road (Fig. 36), or they orient buildings to literally turn their backs to the road (Fig. 37). As a result, people generally do not see corridors as livable neighborhoods, and housing developers do not often think of corridor properties as good places for new investment.

*Essential design features for building frontage.* Scale, architectural consistency (e.g., roof slope, window size, etc.), and prominence of the buildings’ front entries (including protruding porticoes, porches, and canopies as well as prominent front doors) are important elements in relating the building to the thoroughfare. Buffering the residences’ private space from the street is also critical. This buffering is accomplished by mutually reinforcing design devices listed below. In the most urban corridor segments, setbacks may be very small, and the front lawn may be replaced with other buffering devices, such as raising the ground-level residences above the sight lines of people on the sidewalk and/or the addition of porches or stoops to the building frontage.



*Figure 31. An apartment building inserted onto a corridor without compatibility with adjacent commercial uses, lacking buffering to arterial traffic, and displaying an unappealing ground-floor façade of parking garage grillwork. Image: Freedman Tung & Sasaki*



*Figure 32. In this example, continuous “backs” of attached townhomes face onto an arterial corridor. With no front doors, they create the impression of an impenetrable wall, not a neighborhood. The continuous roof slope accentuates the perception of a walled-off area. Image: Freedman Tung & Sasaki*

Buffering features on private property include:

- Front stoops;
- Canopies and porches;
- Front yards;
- Frontage plants and trees;
- Low wall at the back of the sidewalk (Fig. 33);
- Fence at the back of the sidewalk;
- Hedge at the back of the sidewalk; and
- Grade elevation change at frontage (Fig. 33).



*Figure 33. Sidewalk and view of private frontage in San Mateo, California. Layering of elements combine to create meaningful buffering for both pedestrians (curbside parking, planter strip, and street trees) and street-facing residences (decorative landscaping, additional trees, low wall, elevated grade change, stoop entrances, front setback, and front porch fencing).*

Buffering features within the public right-of-way include:

- Public sidewalk of sufficient width where two people can pass each other comfortably (i.e. five to six feet);
- A wide landscaped strip between the sidewalk and the curb with shade trees;
- Street lighting at both the roadway and pedestrian scales;
- On-street parking; and
- Bicycle lanes and transit stops.



*Figure 34. “Mansion” homes on a grand residential avenue in Allentown, Pennsylvania. The buildings collectively shape the street space by having a uniform building setback and street orientation, good massing proportion, a formal front facing the street, a prominent front porch, the same roof type and slope, and attractive details.*



*Figure 35. Rainier Vista, a new corridor housing development along a light-rail line in Seattle, Washington, uses a consistent set of features with variations—gable and sloping roofs with common slope and orientation, window types and sizes, and different cladding and color palettes.*

*The American precedent: the grand residential boulevard.* The grand residential boulevard (Fig. 34) is a historical precedent for creating attractive, comfortable homes on busy thoroughfares. The appealing physical characteristics of the mansion home, coupled with tree-lined streets and comfortable sidewalks, can be adapted to clustered homes of various unit types and income levels (Fig. 35) along these segments.

### 2.2.1.3 Restore walking and street life to high-volume thoroughfares.



Figure 36. An example of a multilane arterial with a typical six-foot sidewalk and no buffering other than the bicycle lane. Pedestrians in such instances feel exposed to traffic, unsafe, and uncomfortable. Image: Freedman Tung & Sasaki



Figure 37. The addition of a planting strip with trees in between a similar sidewalk and bicycle lane substantially improves the comfort of the walking environment and the character of the street. Image: Freedman Tung & Sasaki

Street activity is critical to corridor revitalization. Centers provide the vibrant street life and continuous activity that many suburban consumers now prefer instead strip centers.<sup>20</sup> Segments intended to include housing development that faces the corridor must be attractive and safe. Attractive streetscapes bring pedestrians, and having plenty of pedestrians and “eyes on the street” helps improve both perceived and actual safety.

Employment districts that straddle and face the corridor need activity to support the lunch spots, services, and meeting.<sup>21</sup> The centers and segments are composed to produce activity—they replace the low intensities and monoculture of the strip with a mix of land uses with a varied range of intensity and synergy. They are planned to allow the greatest possible mix of housing types, offices, and shop fronts to bring people together at various times and for various purposes.<sup>22</sup>

The safety and appeal of the restructured corridor rely on the generation of activity both within centers and segments between them. In addition to mixing uses and raising

intensities to foster activity, it is also critical that people can easily walk between centers and segments, and that they do so frequently. They should also find it natural to walk, sit, and meet along the corridor.

<sup>20</sup> See, for example, “Lifestyle Centers Offer More Than Fresh Air,” *Inland Valley Daily Bulletin*, January 9, 2009; or *Greyfield Regional Mall Study*, PricewaterhouseCoopers and the Congress for the New Urbanism, 2001.

<sup>21</sup> See Doug Henton, *ibid.* Also Richard Florida, “How Cities Renew” in *Monocle*, July/August 2008.

<sup>22</sup> Fifty years ago, Jane Jacobs pointed out that the mingling of different people for different purposes “is the only device that keeps streets safe.” William H. Whyte proved, with his research and time lapse photography, that “people go where they see people.”

*Retrofitting that creates a more comfortable pedestrian experience.* Substantial buffering makes a major difference in the quality of the walking environment on an arterial. At a minimum, a consistent planting of curbside street trees can provide buffering between moving traffic and the sidewalk (Figs. 36 and 37). But if these street trees are inconsistent, too widely spaced, or relatively small, people will continue to see the corridor as traffic dominated. If utilities or underground conditions do not allow for trees, other vertical elements, such as a line of closely spaced decorative streetlights, can be substituted.



Figure 38. This right-of-way that was restructured to better support the downtown and introduces trees into the parking lane along the downtown segment (Whittier Boulevard Improvements, City of Montebello, California). Image: Freedman Tung & Sasaki



Figure 39. View of the existing four-lane downtown Second Street (inset) and a digital rendering of the same street segment restructured with landmark streetlight columns inserted between curbside parking spaces. The scale of the taller columns is in context with the high-rise buildings that line the street (Downtown Phoenix Improvements, City of Phoenix, Arizona). Image: Freedman Tung & Sasaki

*Retrofitting along very constrained rights-of-way.* Where additional right-of-way width to add buffering is not readily available (for example where a narrow sidewalk is built right up to a continuous line of existing buildings), certain streetscape design tradeoffs can help to compensate. Allowing the pedestrian and vehicular spaces to overlap in the parking lane can achieve multiple functions in the same limited space. Street trees may be planted in planters between parked cars (Fig. 38). The tradeoff for removing a small number of parking spaces is a less obstructed sidewalk, a wider pedestrian environment, and a visually narrower driving environment—without the expense of relocating curbs and drainage. This technique can be used with other vertical objects, such as streetlights or architectural elements (Fig. 39).

*Comprehensive retrofitting.* The most effective way to integrate relatively high volumes of traffic with vibrant streetside activity is to physically separate the conflicting traffic functions of mobility and access. See “The Multiway Boulevard” sidebar on the next page for a complete description.

## The Multiway Boulevard<sup>23</sup>

The multiway boulevard is a landscaped, multilane street type that was used in the pre-automobile era for its grandeur but today has new applicability because it can bring pedestrians back to our wide thoroughfares. Where communities want to combine relatively high volumes of traffic with significant pedestrian activity, the multiway boulevard is probably the optimal configuration. The design framework contains the same number of through-lanes in its center as any arterial, but adjacent tree-lined side medians separate these center lanes from slow-moving side access lanes, typically with curbside parking. The lanes on either side of the thoroughfare, closest to the buildings, are separated from the higher-speed traffic lanes so that they feel like completely different street environments (Fig. 40). The configuration eliminates most of the usual friction between through-traffic and access behavior (e.g., curbside parking, entering/exiting driveways, passenger drop-off, etc.) and creates a pleasant setting for walking.

Sidewalks along the side access lanes are lined with buildings and shops with ground-level entrances facing the street. The multiple rows of trees on sidewalks and side medians create excellent buffering between the arterial traffic and the upper stories of buildings. This makes boulevard addresses desirable places for upper-story workplaces, lodging, or residences (Fig. 41).

Within this framework, various designs and combinations of use can be accommodated along corridors. Along very densely populated corridors, a corridor center development can straddle both sides of the boulevard. The multiway boulevard results in a wide right-of-way between its two sides, but with the use of the side and central medians as pedestrian refuges, crossing in stages is relatively comfortable (although still a significant distance). The side access lane configuration can be applied in response to different existing or intended combinations of use. For instance, in more suburban locations, a one-sided multiway configuration can support a center located on one side.

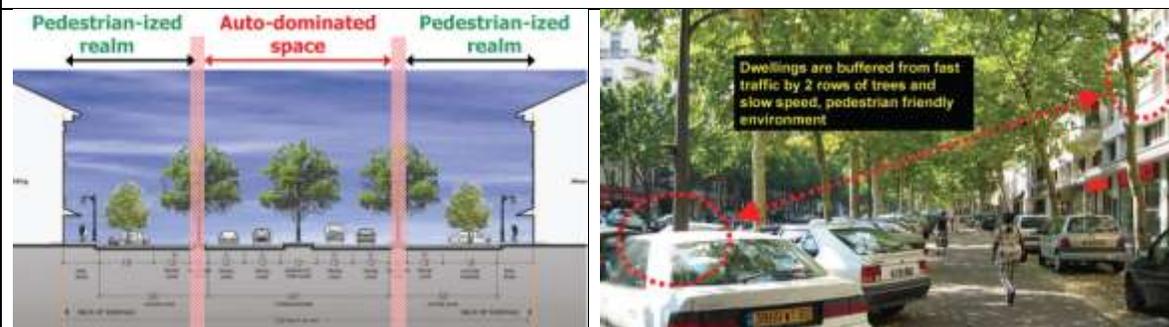


Figure 40. Diagram of how a multiway boulevard dramatically increases the proportion of pedestrian-oriented space relative to vehicular space, making it highly supportive of mixed uses with upper-story residential and office spaces. Image: Freedman Tung & Sasaki

Figure 41. View of Avenue Daumesnil, an existing multiway boulevard in Paris, France. The two rows of trees and the width of the sidewalk, parking lanes, access lane, and side median provide very substantial buffering for the upper-story residences and workplaces from the arterial traffic. Image: Payton Chung

<sup>23</sup> For a thorough and illustrated resource on the multiway boulevard see Jacobs, A; Macdonald, E; and Rofo, Y., *The Boulevard Book: History, Evolution, Design of Multiway Boulevards*. MIT Press, 2003.

*Integrating parking and access with the boulevard.* Like architecture and site design characteristics, appropriate circulation and access features are critical elements of the residential boulevard segment. An important design strategy is to have on-site parking accessed from rear alleys or side streets, allowing uninterrupted and more appealing front yards and sidewalks along the boulevard frontage. This key access management strategy also provides a less conspicuous location for service activities.

#### **2.2.1.4 Visually differentiate the new pattern of centers and segments.**

Street design should deliberately emphasize the differentiation, functional needs, and special character of each center and segment. Each segment should have its own type of uniform and closely spaced street trees and streetlights, with landmarks (Fig. 42) or expressive landscaping between segments. Capital improvement investments should be designed to produce an unfolding sequence of boulevard experiences that benefits wayfinding, city identity, and the growing appeal of corridor properties.



*Figure 42. A city gateway landmark feature on East 14th Street at the border of the cities of Oakland and San Leandro (East 14th Street Gateway and North Area Street Improvements, City of San Leandro, California). Image: Freedman Tung & Sasaki*

## **2.2.2 COORDINATE PUBLIC AND PRIVATE INVESTMENT TO ENHANCE MOBILITY AND ACCESS**

The strip is losing prominence as a retail venue, and its mobility function has also degraded significantly. A revitalization plan uses each increment of private development and public capital improvements not just to stimulate the new development, but also to enhance overall mobility and accessibility. Achieving these goals often requires both short-term capacity improvements and building a better transportation framework one piece at a time. Communities should take advantage of opportunities to improve mobility at a variety of scales by using the plan to orchestrate development site planning and capital improvements, as well as to coordinate and align plans with regional agencies charged with transportation planning. Strategies to enhance future mobility as part of the corridor restructuring include:

### **2.2.2.1 Augment the street network.**

Instigating the development of a fine-grained street network is essential not only to the cultivation of street life, but also to creating alternate routes for trips within the local district. New routes that are parallel to the arterial and connected to surrounding streets improve local circulation and, in some cases, relieve arterial congestion “hot spots” by reducing the number of turns on and off the boulevard and reducing the number of vehicle trips along it. Also, smaller blocks reduce travel distances for walking trips, which encourages people to walk rather than drive.

### **2.2.2.2 Integrate street design with transit infrastructure planning.**

As discussed above, the corridor restructuring framework will incrementally deliver a land use pattern that can be served by public transit. Installing transit infrastructure along the corridor will be easiest where the corridor is connecting to or serving major destinations such as a regional downtown, a university, a civic center, or a sports arena. Where it makes sense and as soon as possible, transit infrastructure should be installed in anticipation of and as a stimulus for new mixed-use, high-density development in centers and new medium-density development in segments.

In instances where transit infrastructure cannot be installed immediately—and there will be many of these—design the corridor to prepare for an increasing commitment to transit. Increasing commitment to transit means gradually changing lanes from mixed-flow traffic (autos and transit together), to a mix of high-occupancy vehicles and transit, and ultimately to dedicated transit-only lanes. Each incremental step makes transit run faster, making it more appealing to riders. Thus, where there is only local bus service, design the corridor to accommodate the transition from local bus to express bus and bus rapid transit (BRT) and perhaps ultimately to fixed-rail transit, where appropriate. Where streetcars or light rail are realistic at some point in the future, design the corridor to accommodate future light-rail infrastructure (Figs. 43 and 44).

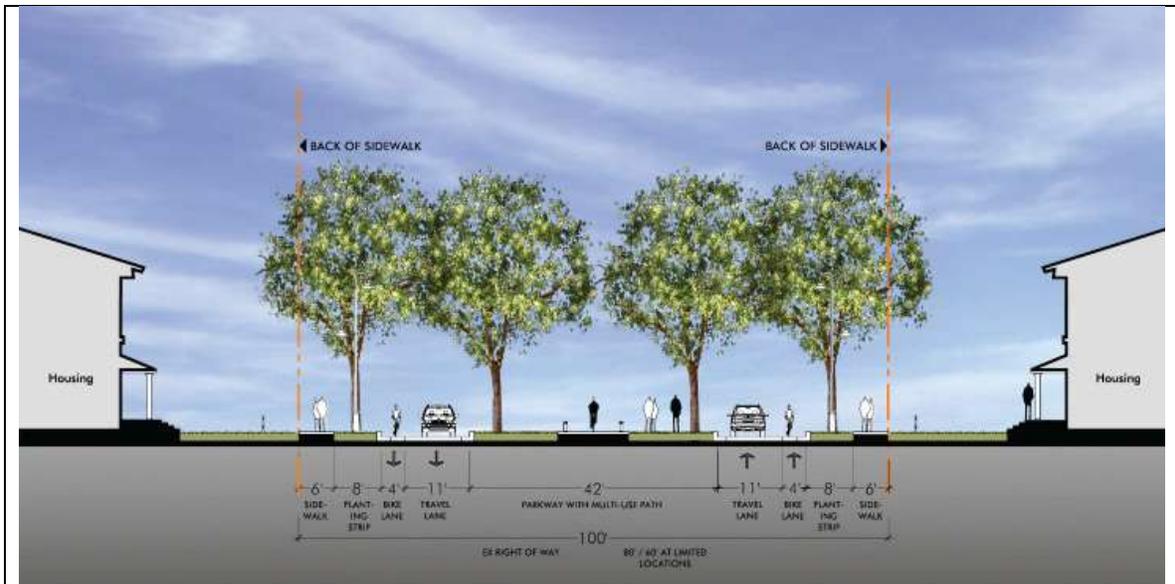


Figure 43. Corridor planned for future light rail: short-term improvements (compare with Figure 44). Image: Freedman Tung & Sasaki

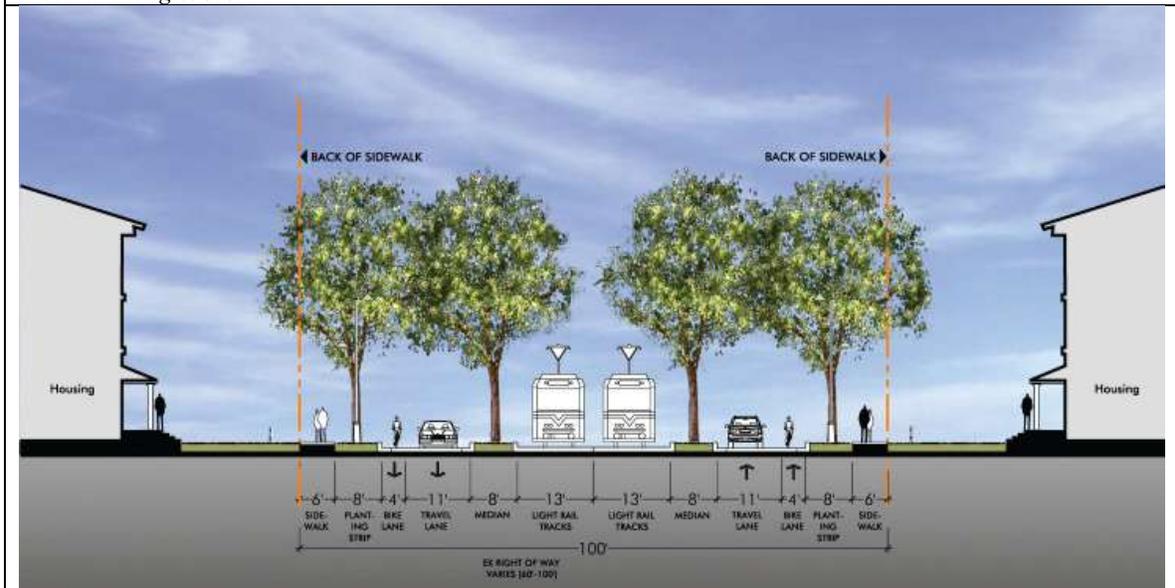


Figure 44. Corridor planned for future light rail: long-term improvements (compare with Figure 43) (Sprague & Appleway Corridors Specific Plan, Spokane Valley, Washington). Image: Freedman Tung & Sasaki

At a minimum, corridor retrofits must provide transit riders with pedestrian space, transit stops, waiting areas, and transfer points. Since transit riders must walk or wheel to get to and from transit, and most will likely cross the major street, safe pedestrian and bicycle access and safety along the corridor and adjacent streets is essential. In some cases, existing shopping centers and destinations may choose to improve walkability and transit access as an interim redevelopment strategy. This can include making better walkways and direct, protected connections through parking lots and providing comfortable transit shelters set back from the main road on private property. For major redevelopments, owners are likely to see the advantage of planning for a major station or transfer center on their property as part of their customer delivery system.

### 2.2.2.3 Guide site development planning to restore thoroughfare capacity.



Figure 45. A five-lane strip corridor in northern New Jersey with small commercial uses and frequent driveway curb cuts, each circled in red, accessed by a two-way center left-turn lane. Image: Microsoft Virtual Earth

The commercial strip is almost always studded with driveways (Fig. 45) and often has a continuous, two-way, center left-turn lane. Both the driveways and the unsignalized left turn pockets create many places where vehicles are turning into the path of oncoming traffic, with an accordingly high rate of related accidents. The multiple turning points also reduce thoroughfare capacity because traffic must slow down when vehicles turn onto and off of the arterial. Replacing strip retail with non-retail uses along segments permits the closure of multiple driveways as well as the elimination of unsignalized left-turn

lanes, both of which substantially increase thoroughfare capacity. To ensure easy access to adjoining properties while making corridor through-movement safer and more efficient, corridor restructuring plans must take every opportunity to implement driveway consolidation, side-street access to properties, use of rear alleys for access and loading, appropriate signal controls and signage, and restriction and control of left-turn movements.

### **3. IMPLEMENTING CORRIDOR RESTRUCTURING**

Section 2 provided the strategic direction that the restructured corridor must follow to break out of the mold of the strip and incrementally re-emerge in a form that better captures market value and projects a positive community identity. Implementing this strategy will require the participation and support of city officials, planners and engineers, stakeholders, and residents. It will require a reorientation in thinking about the corridor and some of the practices involved in planning and designing it. And it will require the adoption of new policy tools and programs that can effectively instigate the necessary restructuring. This section addresses the challenges, collaborative processes, and policy tools that are fundamental to successful implementation of the restructuring plan.

#### **3.1 BARRIERS AND SOLUTIONS**

Pioneering corridor revitalization projects undertaken by municipalities and counties thus far have highlighted similar barriers to success that are specific to this project type. The following are some of the most commonly encountered barriers and the lessons learned thus far about overcoming them.

##### **3.1.1 THE DIFFICULTY OF ENVISIONING SUCCESS**

Corridor revitalization planning may be an unfamiliar endeavor for many participants. For example, when local governments convene residents and stakeholders to consider redesigning strips, many people simply envision more strip, usually with more attractive landscaping, more coordinated monument signs or architecture, and perhaps some extra turning lanes. As we have seen, this is not what the strip needs. The strip needs to be gradually changed into something different, and perhaps the most critical ongoing job of the corridor planning facilitators is to assist all participants in the planning process to clearly envision and evaluate the desirability of a potentially very different future corridor. Drawings, sketches, or computer simulations that can be readily understood by citizens without architectural or planning backgrounds are critical to discussion and decision.

##### **3.1.2 STAKEHOLDER OPPOSITION TO CHANGE**

After 40 years of strip retail dominating suburban shopping, corridor re-planning efforts may concern long-term property owners accustomed to retail strip development being the best and often only source of value for their properties. To gain stakeholder support, the corridor planning effort must be organized around a patient and open workshop process that gives participants objective information and case studies so they can understand the major shifts affecting their properties and decide for themselves. Many property owners along strip corridors will have witnessed the changes in the strip's fortunes over the years and will want to learn about the causes of these changes and strategies that redirect investment for everyone's benefit. Property owners should hire a consultant to evaluate the viability of residential development, and its potential property value compared to retail development on segment-located properties. They will also want to see economic studies that compare the retail demand for the corridor to the amount of property zoned

for retail use.<sup>24</sup> This analysis helps determine how much more retail, if any, the corridor can support. The community workshop process should also focus on residents' concerns of residents, particularly those in the neighborhoods immediately adjacent to the strip. The public participation process is discussed further in the next section, "Managing the Planning Process."

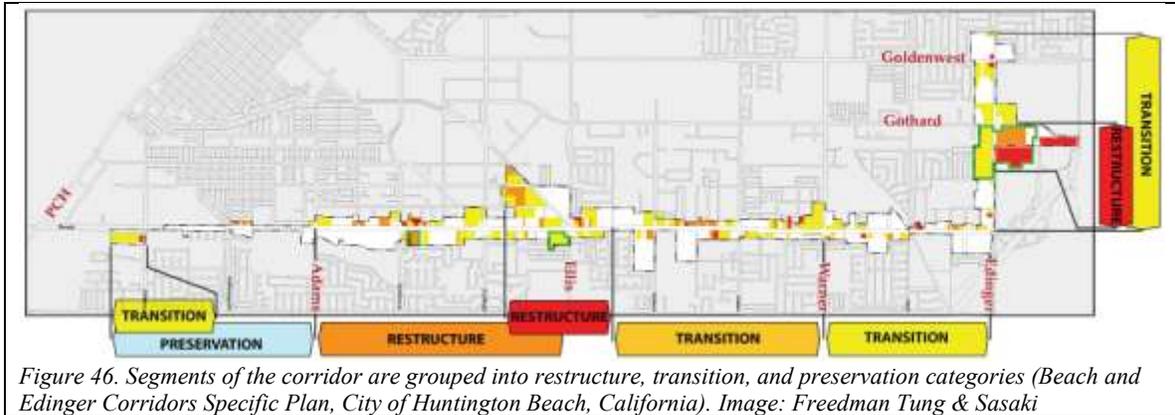
### **3.1.3 VARIED POTENTIAL FOR CHANGE IN THE CORRIDOR**

Although the forces driving strip restructuring are national, the degree to which revitalization is pressing or even possible in the short term varies, not only between corridors but often between portions of a single corridor. Depending on the condition of various segments along any given strip, some segments may need a gradual transition, whereas others may be ripe for dramatic near-term change. Still others will be relatively stable, at least for the time being. Inventorying the conditions in place and checking them against demand and investors' intentions are important steps in the re-planning process and will provide an essential basis for shaping shared expectations and priorities. Appendix A contains detailed instructions for a useful existing conditions inventory.

Along all but the most dilapidated (or barely built) corridors, restructuring strategies and implementation measures will need to be calibrated to make the most of existing value. In some segments, long-time businesses and services may have a loyal customer base from surrounding neighborhoods. Careful corridor redesign can integrate viable businesses with phased-in redevelopment, improving mobility and access while enhancing the corridor's character. Where conditions are ripe for change and new investment, planning tools may be employed relatively aggressively to instigate fairly dramatic restructuring in the short term. Where the existing strip contains only a few opportunity sites among stable existing development, a strategy to promote transition while maintaining the stable development may be more appropriate. In segments where existing economic activity is consistently strong and buildings well maintained, policies might be adopted to allow long-term transition while continuing to accommodate existing development. Determining how to apply these calibrated strategies in a single corridor (Fig. 46) is one of the key tasks in developing a plan that builds on the strengths already in place and that makes sense to stakeholders.

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<sup>24</sup> Several first-generation corridor restructuring plans that included comparative assessments of the value of housing versus retail found housing to be more potentially lucrative than retail development for segment-located properties. See, for example, Gruen Gruen + Associates, "Likely Highest and Best Uses for North Brentwood Boulevard," November 9, 2004, prepared for the city of Brentwood, California, as part of the Brentwood Boulevard Corridor Specific Plan project.



### 3.1.4 STREAMLING PUBLIC AND PRIVATE INVESTMENTS

This publication has emphasized how a healthy corridor integrates the thoroughfare design with the configuration of land use and development that it serves. For example, Section 2 emphasized the importance of designing the space between the buildings and the moving traffic—the public and private frontages—as a single integrated unit. However, the timing of public investments in capital improvements within the public right-of-way rarely coincides with the installation of private improvements on the other side of the right-of-way line. Plans for the former are typically prepared under the auspices of municipal, county, or state public works departments, whereas the latter are designed by the architects of each development in accordance with municipal standards. Each of these groups has different objectives and priorities, which manifest in different ways in the scale and organization of sidewalk areas and in the landscaping of building setback areas. To successfully revitalize commercial corridors, the corridor planning team and planning and public works department staff members must collaborate effectively to define a cohesive design to which all parties will adhere as investments are made.

Successful projects typically address the priorities of multiple agencies, making them eligible for funds from transportation, housing, community development, and environmental agencies. Furthermore, significant corridor improvements can be implemented as part of a privately funded redevelopment project—for example, creating new road networks through former shopping center parking lots.

## 3.2 MANAGING THE CORRIDOR PLANNING PROCESS

The complexity of strip corridors invariably triggers the involvement of multiple agencies, departments, business operators, and property owners. Residents and owners of properties adjoining corridor parcels often also have a keen sense of ownership of the corridor. Given all the interested parties and their many different priorities and mandates, the management of an effective planning process is vital to success. The following sections focus on practical issues that local governments may encounter as they plan for and implement corridor revitalization.

### **3.2.1 THE CRITICAL ROLE OF LOCAL GOVERNMENT**

As noted in Part One, corridor restructuring requires leadership by local government. Local governments are uniquely equipped to leverage policy, planning, and investment tools in support of corridor re-structuring. These tools permit local government—and only local government—to play a variety of roles critical to corridor revitalization:

#### **3.2.1.1 Convener of the public process.**

The planning and implementation of corridor restructuring strategies requires support from and action by many individuals and organizations from both the public and private sectors. Local government is uniquely qualified to convene the many parties involved, though some communities may have a strong nonprofit organization also suited to bringing people together to focus on corridor development. The role of convener is a continuing one, since interaction, support, and consistency of decision-making will be needed throughout what is typically a lengthy implementation period. See Section 3.2.3—Orchestrating Community Participation.

#### **3.2.1.2 Regulator of land use and development.**

Potential investors look for “certainty” in development codes and controls which can only be established and enforced by the municipality through a clear land use and development policy.

#### **3.2.1.3 Sponsor of capital improvements.**

The public right-of-way is owned and controlled by the public sector—the municipality, the county, or the state. The critical importance of reconfiguring the public right-of-way means that capital improvements have a big role in implementing the corridor restructuring plan. While improvements may be funded and constructed by private investors or by the government, it is the public agency’s responsibility to establish standards for the right-of-way and to control and coordinate improvements.

#### **3.2.1.4 Collaborator in other agencies’ decisions.**

In most regions of the country, local governments are involved a wide range of activities that are relevant to corridor restructuring but that occur at a larger geographic scale. Many strip corridor rights-of-way are owned by the states and controlled by state departments of transportation, which will coordinate redesign with municipal governments but not with any private actors. Transit agencies, sewer authorities, and regional transportation planning organizations are among the formal entities whose decisions can aid or impede implementation of the restructuring plan. Some of these entities are comprised of elected officials from local governments, giving the municipality a direct say in creating a framework that supports corridor revitalization.

### **3.2.2 MANAGING INTERDEPARTMENTAL AND INTERDISCIPLINARY COLLABORATION**

Many local government departments will have to support preparation and implementation of the restructuring plan. The departments of planning, economic development, environment, and public works are invariably involved. Depending on the scope of the plan and the local governmental structure, transit, redevelopment, housing, or parks agencies may also be involved. Several communities found an interdepartmental “core team” to be a useful project management tool. The core team is a group of senior staff that collaborates with the primary technical team throughout the project. Recommended members are, as applicable, the community development director, the redevelopment director, and the public works director, with a second person from each department as well. For example, since traffic circulation is typically an important issue in any corridor revitalization project, a traffic engineer would be a good second representative from the public works department. Including the city manager as a key member of the core team is also highly recommended.

The core team must actively participate in developing the plan’s concepts and contents. Team members are responsible for coordinating with the rest of the staff in their departments and communicating between the core team and the departments. It is essential to the project’s continuity and the core team’s credibility with the rest of the local government staff that the core team’s membership remains constant throughout the project.

At key junctures in the development of the plan elements and outcomes, the core team should present its recommendations for informal review and discussion by the city council and its advisors on the planning commission and other boards. These study sessions will involve municipal decision-makers in the discussion of the specific plan as it is being developed, rather than waiting until the end. These meetings should be set up as working sessions rather than as more formal public hearings. Preferably, they would not be held in city council chambers, and there would be no formal adoptions. Such sessions let council members and commissioners ask questions, make comments, and express concerns before plan details are finalized. They ensure that decision-makers will receive a plan that implements their vision for the corridor.

A final function of the core team is to lay the groundwork for community engagement throughout the planning process. Like any effort that requires broad support from both the community and the local government, the restructuring process needs champions—individuals who are in leadership positions in the community and who are fully and publicly committed to the restructuring effort.

### **3.2.3 ORCHESTRATING COMMUNITY PARTICIPATION**

The planning process must be open to everyone in the community. This openness is critical to a plan’s success, as community members will enthusiastically support only plans that they understand and believe in. Public workshops must blend education with meaningful participation in shaping the plan. Educational components must be engaging

presentations that show participants how properties can maximize their value while creating a stronger local identity and better places to live, work, and play. Participatory techniques must create venues through which even the most reluctant participants can contribute their opinions and provide input. In addition to workshops, outreach is essential, including low-tech but essential direct mail notices for workshops sent to all business owners, residents, and property owners within and adjacent to the project area; notices and articles in the local newspaper; information on the local government web site; and a project web site that notifies people of public meetings and regularly posts news, updates, and relevant documents.

Typically, two issues are of particular concern to public workshop participants: the economic foundation and the traffic implications of the plan. The conceptual approach to these topics is covered in Part Two of this publication. A successful workshop process will integrate these topics in presentations to participants so that they can evaluate potential futures for the corridor more comprehensively and with an open mind. The process must also allow public and personal discussion and consideration to take place, as well as opportunities for participants to join in as the planning process unfolds. The plan and the process can gain substantial credibility from workshop participants who start out opposed to the plan but, with participation in workshops and discussions, become plan supporters.

### **3.3 THE “FORM-BASED” DEVELOPMENT CODE**

The approach to strip corridor revitalization that is described throughout this publication relies on the transformation of the physical structure of the corridor from monolithic strip to a pattern of centers and segments. To orchestrate and to promote this essential structural change, development regulations must undergo a parallel change in structure. Instead of being organized by land use categories, they should be organized by center and segment type, with regulations enforcing the necessary anatomy of each and with land use being a component. To ensure coherent centers and segments with the qualities discussed in Section 2, the new policies must provide a framework that addresses the form and placement of buildings and the relationships between them for each type of center and segment. The development code changes must be prepared in concert with specifications for improvements to the public realm, including both existing and new public rights-of-way and open spaces. This is the foundation of a “form-based code,” or a code that “...envisions and encourages a certain physical outcome.”<sup>25</sup>

#### **3.3.1 DEVELOPMENT CODE ORGANIZATION**

The conventional zoning categories of a typical municipal zoning code are organized by use and density, which say little about physical outcomes. Historically, zoning regulations were intended to eliminate conflicts between incompatible activities (such as residences heavy industry) and secure the land value of higher-value uses. The results of this system fall into two different categories. For areas zoned with a single use and

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<sup>25</sup> Duany, A., Sorlien, S., and Wright, W. *Smart Code Version 9 and Manual*. New Urban News Publications, 2008.

density, such as housing subdivisions or business parks, conventional zoning typically produced cohesive zones of use and building type that tended toward extreme uniformity as the scale of real estate development escalates. For the few more mixed-use parts of suburban cities—the downtowns and the strip corridors in which retail, office, medical, government, and lodging uses are permitted—use-focused zoning has produced the opposite: an essentially haphazard distribution of building types and site treatments that fail to create a sense of place or coherent structure.

The key to the approach to restoring value to corridors discussed throughout this publication is to establish a system that allows a mixture of an even wider spectrum of use, but that delivers cohesive place making—and along with it market focus—as envisioned for each of the centers and segments along the corridor. To do so, the code should depart from the conventional practice of organizing development exclusively by use and density. Instead, it should be organized by the intended city structure of center, segment, and neighborhood (a segment is often the edge of a neighborhood). The regulations define the compatible features—building orientation, frontage treatment, disposition, use, height—that provide each structural piece of the city with a coherent character and function.

Depending on their location in the city and the region, some corridors (or portions of corridors) will most appropriately be urban in character, whereas other corridors (or portions of corridors) will most appropriately be more suburban or even rural. The key determinant of how “urban” development becomes is the combined effect of building height, mass, and setback; site coverage; parking type and location; private and public frontage treatment; the proportion of paved surface to planted ground cover; and the formality or informality of the landscaping arrangement. The development code should reinforce a regional continuum of urban to rural—that is, within the urban-to-rural transect (Fig. 47). The character and function of a district, center, or segment depends on its role in the restructured corridor and its place in this continuum. Figures 48 through 51 illustrate examples of housing and neighborhood contexts, from a detached single-family home with a porch, landscaped yard, and picket fence to an urban apartment building with an entrance built up to the edge of the sidewalk.

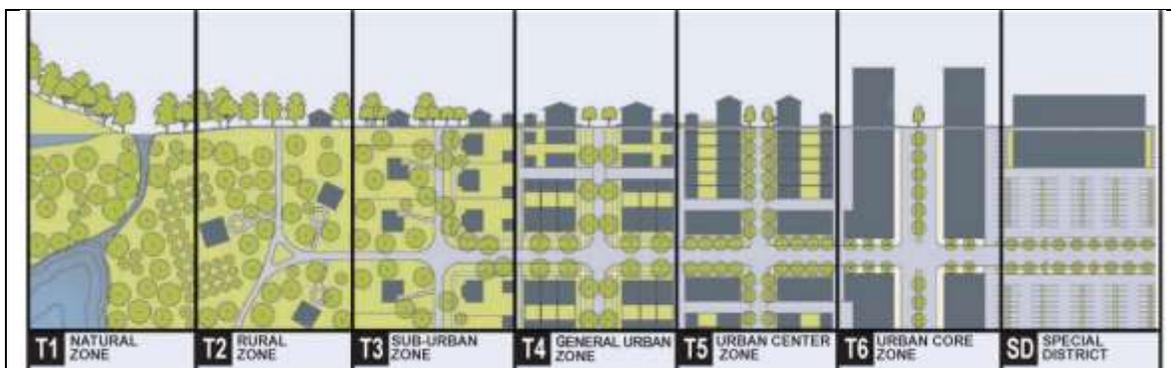


Figure 47. The transect, a continuum of rural-to-urban development contexts, was first developed in the 1980s by Andres Duany and Elizabeth Plater-Zyberk. Image: SmartCode version 9.



Figure 48. A detached single-family home featuring a porch, a deep front-yard setback, and a frontage picket fence. Image: Freedman Tung & Sasaki



Figure 49. A grand boulevard duplex with a moderate setback and stoops. Image: Freedman Tung & Sasaki



Figure 50. Urban townhomes with a small setback and individual stoop entrances along the sidewalk. Image: Freedman Tung & Sasaki



Figure 51. An urban apartment building with no setback and a shared lobby entrance built along the edge of the sidewalk. Image: Freedman Tung & Sasaki

### 3.3.2 REGULATING PLAN

A regulating plan bridges the gap between the goal-oriented language of the restructuring plan and the details of the code’s standards and guidelines. The regulating plan, typically a map of the entire corridor, establishes the boundaries of the corridor’s centers and segments (Fig. 52) or “place types.” Each center and segment has shared objectives and will be regulated under a unified set of standards—in this respect, the regulating plan is like a conventional zoning map. However, unlike a conventional zoning map, the emphasis in the regulating plan is on distinguishing a development pattern that establishes the identity of specific locations along the corridor.

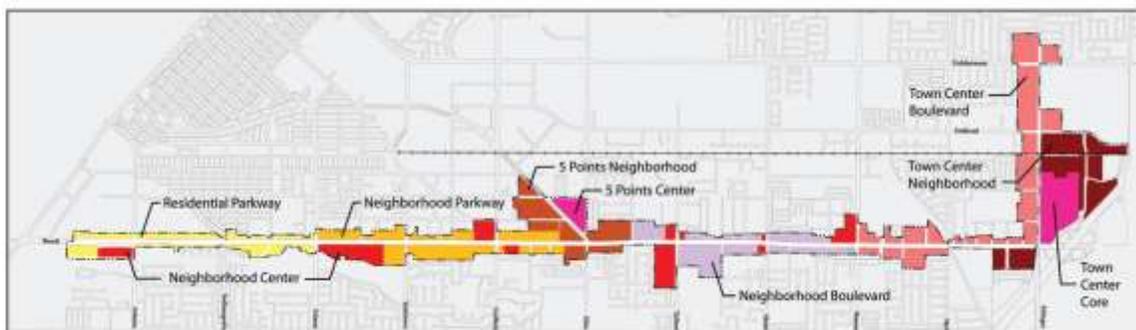


Figure 52. An example of a corridor regulating plan (Beach and Edinger Corridors Specific Plan, City of Huntington Beach, California). Image: Freedman Tung & Sasaki

### 3.3.3 REGULATING PHYSICAL CHARACTERISTICS FOR PRIVATE DEVELOPMENT

The establishment of place types as an organizing principle highlights the variation in physical characteristics desired in each location. The physical characteristics of development that affect the character and form of a center or segment include the building envelope (building height, length, setback, and massing), the relationship to the street (building orientation and entrance treatment), parking configuration, landscaping and open space, and signage. Addressing each physical characteristic through a separate regulation means that each regulation is simpler, with brief text definitions supplemented by technical diagrams that make the regulation easy to review and the intended physical outcomes clear (Fig. 57).

Residential Parkway	Town Center Boulevard	Neighborhood Boulevard	5-Points Core
			
<ul style="list-style-type: none"> <li>• <i>Permitted:</i> Residential; Corner Store Retail</li> <li>• 1 – 4 floors</li> <li>• Development oriented to SIDE STS.</li> <li>• Setback Zone: substantial planting and/or decorative walls &amp; fences</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Permitted:</i> Retail, Auto Sales, Office, lodging, housing</li> <li>• 1 – 4 floors</li> <li>• Development fronts Beach Blvd./Edinger</li> <li>• Moderate setbacks w/ formal landscaping</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Permitted:</i> Medical, Office, lodging, and housing; Neighborhood Serving Retail &amp; Auto Sales</li> <li>• 1 – 4 floors</li> <li>• Development fronts Beach Blvd.</li> <li>• Moderate setbacks w/ formal landscaping</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Required:</i> Ground floor retail shopfronts</li> <li>• <i>Permitted:</i> Housing, office, lodging above</li> <li>• 3 – 8 Floors</li> <li>• Urban frontage treatments: Wide sidewalks with trees in grates and pedestrian scale streetlights</li> </ul>

Figure 57. A comparison between the physical characteristics of different corridor centers and segments (Beach and Edinger Corridors Specific Plan, City of Huntington Beach, California). Image: Freedman Tung & Sasaki



*Figure 58. Without design regulation, mixed-use districts can result in incompatible development types, discouraging investors. This example shows a single-family home with front and back yards, flanked on one side by a 3-story apartment building atop partially sunken parking and on the other by a commercial repair business with a front parking lot and double-width curb cut. None of these buildings enhances the value of its neighbors. Image: Freedman Tung & Sasaki*

Good design is part of a successful formula for revitalization. Investors may perceive mixed-use districts as places whose sites have potentially incompatible neighbors (Fig. 58). Mixed-use districts pose greater risks in comparison with controlled environments such as shopping centers, business parks, or housing subdivisions. As a result, single-use districts typically out-compete downtowns, corridors, and other mixed-use locations because they are more predictable for investors. However, community members and local governments are becoming unsatisfied with the character of the

environments created under conventional zoning standards. Form-based codes emphasize compatibility through regulations that control the physical characteristics of development. They are highly illustrated documents that use different techniques—renderings, perspective sketches, and regulatory diagrams—to communicate clearly and effectively both regulations and intent. As a result, investors, regulators, and community members can better understand the plan, and project proponents can move forward with confidence that they understand the requirements for new development and the outcomes that will result.

For example, typical strip commercial corridor developments feature:

- 1) Surrounding parking lots;
- 2) Large front setbacks; and
- 3) Entrances that face parking lots.

To change these physical characteristics, the code can:

- 1) Define parking types according to their physical form (e.g., front surface parking lots, side surface parking lots, or rear surface parking lots);
- 2) Regulate a building's orientation by determining where the building's primary entrances may be located; and
- 3) Regulate maximum setbacks and frontage characteristics.

### **3.3.4 ORIENTING USERS AND ADMINISTRATORS TO THE CODE**

The assembly, review, and adoption of a user-friendly, form-based code can be a challenge. A form-based code is a significant departure from conventional zoning practice. Preparation, adoption, and implementation of form-based codes are major innovations for most local planning departments. As such, form-based codes need to be carefully and thoroughly introduced to citizens, decision-makers, and other stakeholders.

Until form-based codes become the norm, the planning process will need to include dedicated orientation sessions on this new type of regulation. Staff education and training before the code takes effect is particularly important, as staff are responsible for both administering the code and introducing it to the public “at the counter.” It is important to make the code easy to understand and use; quick-reference regulation charts and development code organization diagrams can help make the code more accessible.

### **3.4 THE RESTRUCTURING PLAN DOCUMENT**

A successful restructuring plan enables the local government to effectively regulate, sponsor, convene, and collaborate by orchestrating private and public investment along the corridor. Such a plan must present the community’s vision for the evolution and continued growth of the corridor. It must establish the primary means of regulating land use and development. Finally, the plan should contain a program of planned actions and investments that will stimulate and complement private corridor investment. To make the public- and private-sector roles clear, the plan document should be organized as follows:

#### **3.4.1 THE COMMUNITY VISION FOR THE RESTRUCTURED CORRIDOR**

The plan should record a corridor revitalization strategy that illustrates the intended future form and character of the corridor. It should also set forth an explicit roadmap for realizing this future by specifying how public actions and private investment will realize that vision. This section forms the basis for the development regulations and municipality actions that are in the subsequent two sections of the plan.

#### **3.4.2 DEVELOPMENT REGULATIONS**

Existing zoning regulations along the corridor will be replaced with new development regulations that should:

- Make the corridor zoning more effective at guiding physical change in the direction the community intends;
- Streamline the development process by providing clear and comprehensive instructions to developers and their architects; and
- Provide the municipality with tools that are user-friendly, engage prospective investors, and answer property owners’ questions.

#### **3.4.3 MUNICIPALITY ACTIONS**

The restructuring and ongoing revitalization of the corridor is supported by a program of community actions and investments. Given the level of restructuring envisioned and the many needs represented, this program should be implemented in phases according to the availability of municipal resources—a point that should be made clear in the text of the plan document. Complementing the development regulations, this section outlines the strategic investment of limited community resources necessary to accelerate the revitalization process and to add to the appeal and success of the corridor. It typically includes:

- A description of capital improvements and their phasing;
- A financing plan;
- Implementation actions and responsibilities;
- A parking management program;
- A transit and circulation improvements program; and
- A utilities and infrastructure improvements plan.

Restructuring plans typically call for scores of changes over miles of strip. Capital budgets can reach tens of millions of dollars, with plans for even more private investment value. With an agenda of this scope, a pressing question is where to start. To prioritize public action for plan implementation, the municipality should group corridor segments into three categories reflecting the type and timing of expected change along the corridor (Table 2).

**Table 2**

<b>Group #</b>	<b>Focus of Change</b>	<b>Time Frame for Change</b>	<b>Near-Term Implementation Strategies</b>	<b>Implementation Priority</b>
1	Restructuring (high vulnerability to change)	Near-term initiation (0-5 years)	Capital improvements, re-zoning	First
2	Transition (medium vulnerability)	Mid-term initiation (5-10 years)	Re-zoning	Second
3	Preservation and enhancement (stable and consistent with restructuring)	Not relevant	None	Third

Based on this prioritizing, the municipality can promote change by being the first investor in locations that have the highest potential for near-term change. Prioritizing must engage the public, since corridor investments require full support from private and public investors and organizations. Therefore, the prioritization of municipal actions should also be guided by the goals and strategies outlined in the revitalization strategy section of the plan.

## 4. CONCLUSION

Arterial strip corridors are less than a century old in the United States, but they are now omnipresent in every populated region from small towns to big cities. The once-focal transportation and development roles they initially played in our communities have changed dramatically with the completion of the interstate highway system and the resulting transformations in Americans' work, home, and leisure choices. The retail industry has evolved with these changes to create development formats that no longer demand long corridors of commercial properties. Because of this market change, corridors have seen marked disinvestment, which has become a structural problem that is not simply a result of boom and bust cycles. Strip corridors contribute to sprawling development patterns that increasingly are defined by traffic congestion. Finally, most corridors leave much to be desired as physical places that inspire community care and pride.

Restructuring corridors can provide important benefits to the community beyond the actual corridor, including new housing choices, convenience, transportation options, an improved neighborhood image, and a distinctive community identity. Restructuring can respond to market demands for more compact, livable, and vital places; economic opportunities for property owners; and the implementation of smart growth strategies that bring environmental and community benefits. But to make it happen, public leadership is essential. Only the municipality can play the roles necessary to lead the community to envision the future, coordinate and guide private investment, update development policies, and implement the changes to right-of-way configuration and management.

Transforming corridors will require major interventions, along with creativity and commitment in carrying them out. This publication has presented broad corridor restructuring principles that should be tailored to the characteristics and challenges unique to a particular corridor. Corridor restructuring should align with national and local retail industry types and "behaviors," as well as with consumer demand for housing types and industry preferences for workplace types. The development pattern of the corridor should be organized into a pattern of centers and segments that is sustainable in terms of economics, community activity, and resource use, while respecting the character of surrounding neighborhoods and long-term viability of existing businesses. The restructured corridor will have as its backbone a new kind of arterial—a boulevard configured for multimodal movement and "context-sensitive" design so that the right-of-way makes proper settings for development on abutting properties. To achieve success, the corridor plan and its development codes should establish specific guidelines to create predictability for investment.

Corridor restructuring is an emerging phenomenon in planning and development of our 21<sup>st</sup>-century communities. In comparison with the familiar downtown, the business park, or the single-family home neighborhood, the vision of the restructured corridor may be unfamiliar to many in the community, the private sector, and the local government. Education will be the key in both visioning and implementation. The story should be told visually—"before" and "after" images, analytical diagrams, three-dimensional renderings,

illustrative master plans, development prototypes, guideline graphics, and similar images will help stakeholders and investors visualize and understand what is needed. Such a dialogue should also be done through a patient and open community planning process to achieve consensus. Municipal staff members will also need focused education on how to use the performance-oriented tools, such as form-based codes, that are the restructured policy types that go hand-in-hand with the restructured place types they help create.

Although the work required may seem formidable—and the process lengthy—the results can be worth it. Through patient collaboration, attention to design details, public and private investment over time, and the community’s desire to change its future by remaking a roadway, the strip can become both passage and place.

## APPENDIX

### *THE EXISTING CONDITIONS INVENTORY*

The preparation of the corridor restructuring plan begins with an assessment of the physical, economic, social, and regulatory conditions in place at the start of the planning process. A thorough inventory and careful documentation is essential to the development of responsive strategies and policies to achieve community objectives. The existing conditions inventory should be based on thorough fieldwork, maps, and aerial imagery. To facilitate concentrated study as well as discussion with project participants and stakeholders, a thorough photographic record should be compiled, including aerial photos of the corridor and its surroundings, as well as eye-level photos of all corridor-facing development. For very long corridors, video can provide a convenient record of conditions that can be consulted repeatedly as part of the process of developing responsive planning concepts. Technical reports, base maps, or studies providing information on one or more aspects of the corridor's conditions may need to be prepared if up-to-date data are unavailable.

The inventory should focus on aspects of the corridor that are likely to have practical value to the planning process. It identifies and displays features and patterns of development that the plan can build upon to enhance vitality and identity, as well as patterns and features that may ultimately need to be replaced with new investment of another type. Communities that have conducted successful corridor restructuring efforts have made particularly good use of maps and technical studies focused on the following features of existing commercial strip corridors:

1. Pattern of existing development.
2. Local and regional context.
3. Economic and market conditions.
4. Vulnerability to change.
5. Land use and development policy.
6. Mobility, access, and connectivity.
7. Street design.
8. Environmental/ecological factors.
9. Design context: character and identity.
10. Other existing conditions requiring attention.

However, due to the wide variation in corridor and contextual characteristics, corridor revitalization planning teams must pay close attention to the unique characteristics of the particular corridor under study to identify any additional aspects that merit mapping or technical reports.

## 1. Pattern of Existing Development

The pattern of existing development along the strip—that is, what makes the strip a “strip”—is the product of a layered composition of four essential features: parcels, buildings, land uses, and blocks.

- The **Parcel Map** reveals whether properties are shallow or deep and how properties of various sizes are distributed along the corridor. In many cases, this map will reveal significant constraints to new investment or significant redevelopment potential.
- Preparation of a **Building Footprint Map** (Fig. A1), which outlines the edges of all existing building plans and colors them in a solid single color, makes visible the way that buildings relate to the street corridor—with consistency or irregularity.

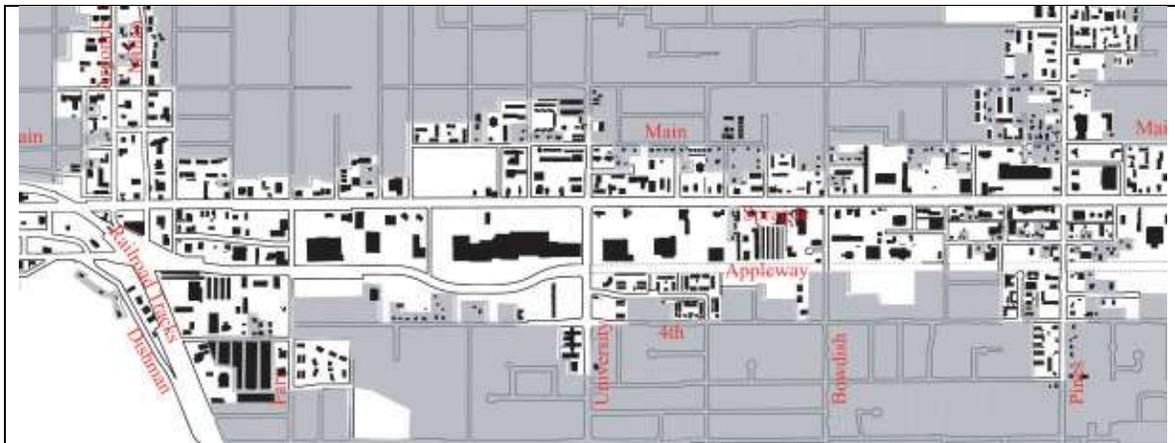
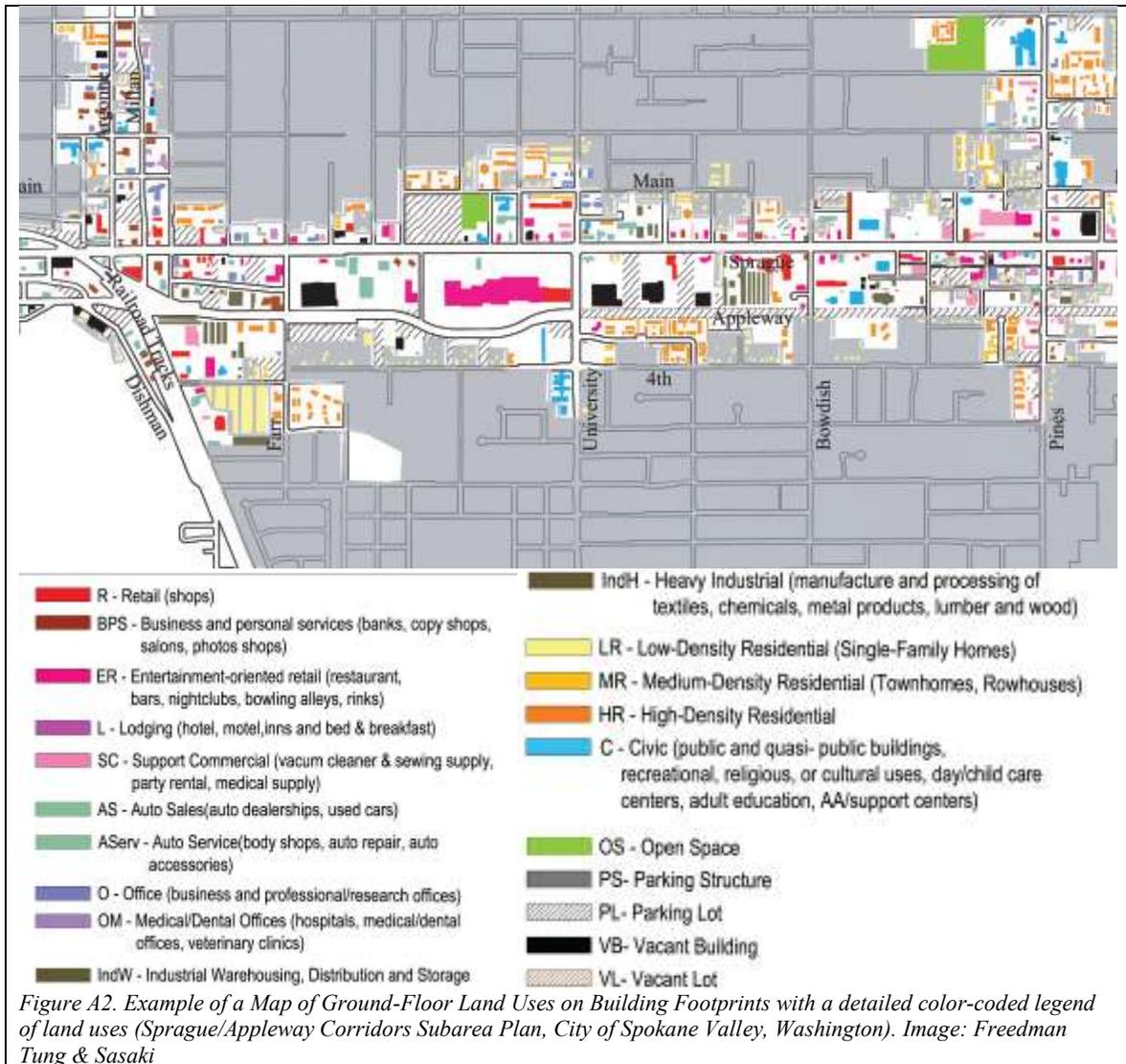


Figure A1. Example of a Corridor Building Footprint Map (Sprague/Appleway Corridors Subarea Plan, City of Spokane Valley, Washington). Image: Freedman Tung & Sasaki

- **Ground-Floor Uses** (Fig. A2) should be mapped within the building footprint outlines and color coded so that patterns of use can be easily detected. In most suburban locations, mapping ground-floor uses will suffice because almost all of the buildings are single story. But in locations with a significant number of multistory buildings, a map of Above-Ground-Floor Uses should also be prepared, with the number of levels indicated next to each building outline. It is very important that this map not be mistaken for a land use map in which parcels are color-coded by existing use, because that would mask the difference between a tiny building on a large site (very common on strips) and a large building with the same use on a large site.



- A **Streets and Blocks Pattern Map** (Fig. A3) with blocks colored in a single solid color makes visible the frequency of street connections, the size and shape of blocks, and the degree to which the scale of development accommodates walking and bicycling.

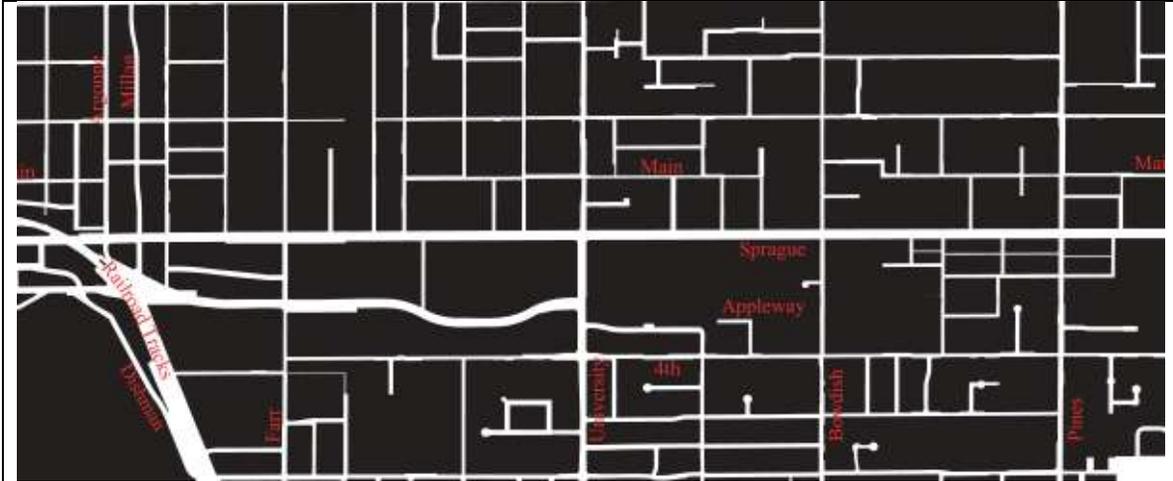


Figure A3. Example of a Streets and Blocks Pattern Map (Sprague/Appleway Corridors Subarea Plan, City of Spokane Valley, Washington). Image: Freedman Tung & Sasaki

- Other types of maps can aid in analyzing and discussing specialized patterns of existing development that may be important to illustrate for certain corridors, such as a **Map of Auto-Serving Surfaces** (Fig. A4).

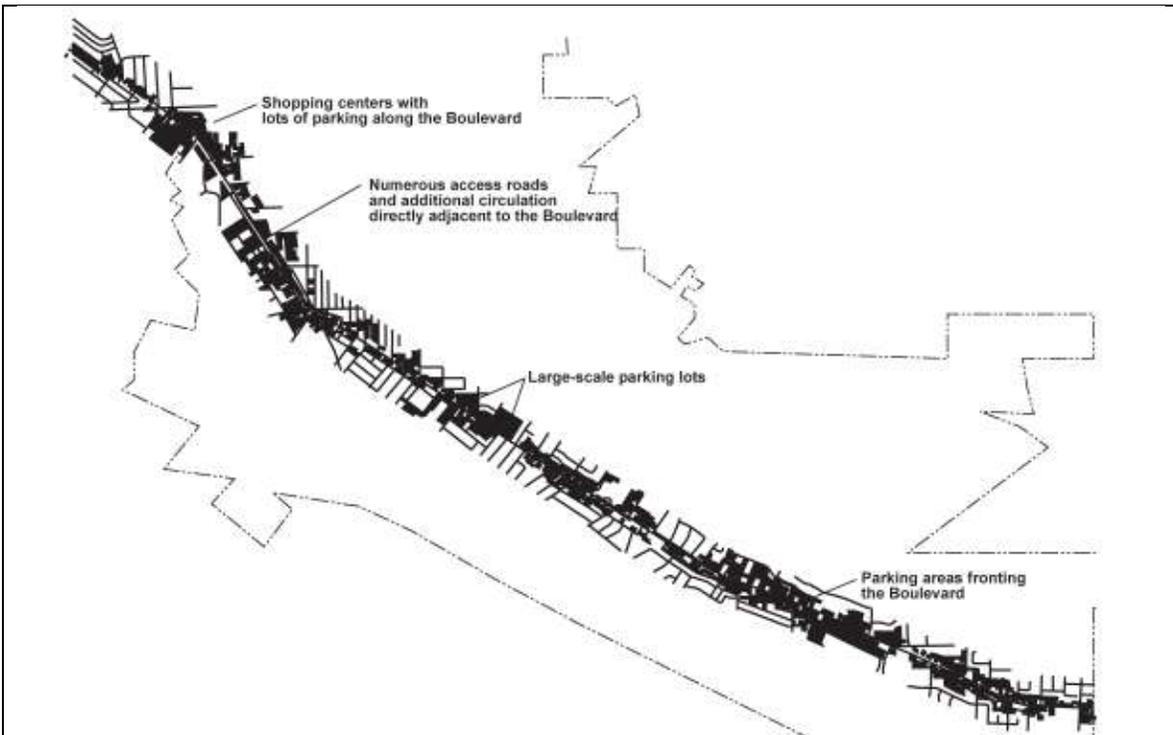
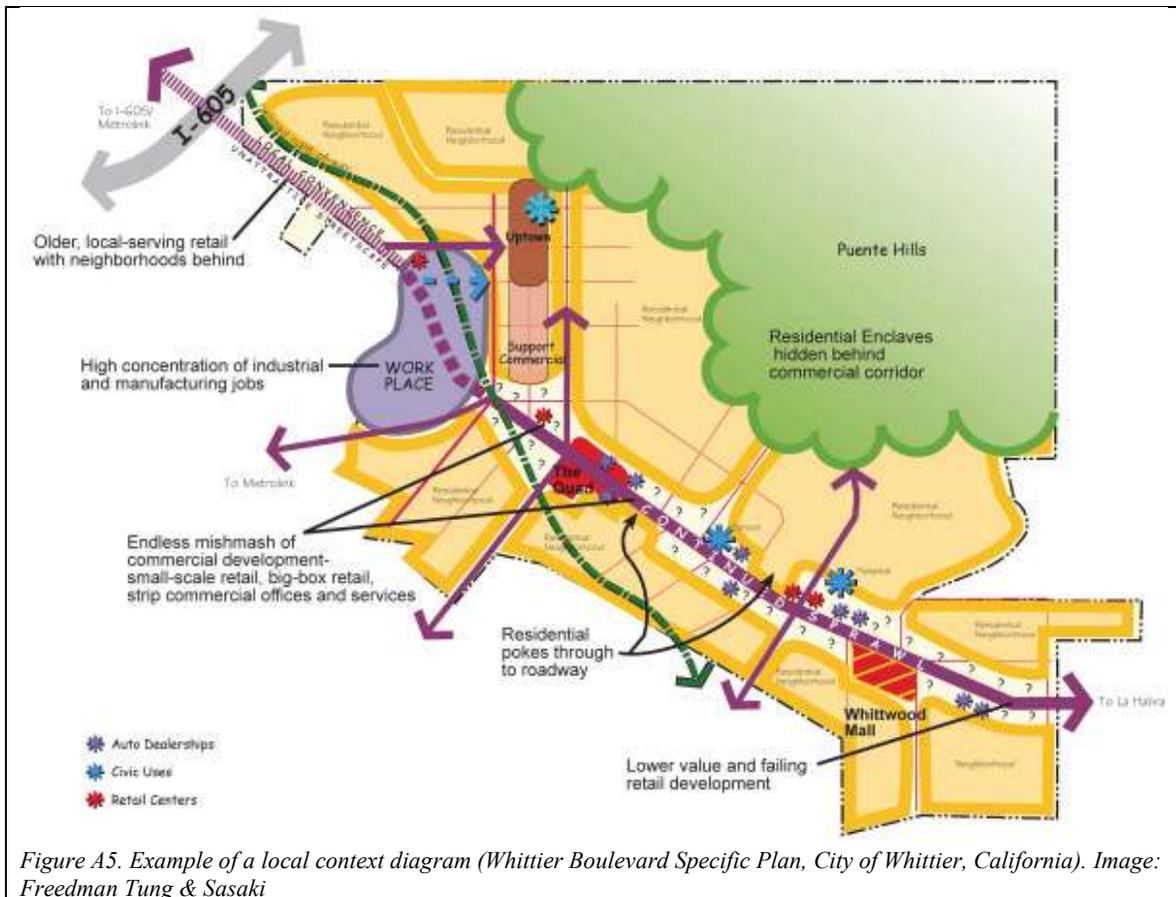


Figure A4. Example of an Auto-Serving Surfaces Map (Whittier Boulevard Specific Plan, City of Whittier, California). Image: Freedman Tung & Sasaki

## 2. Local and Regional Context

From motorists' vantage point, the strip appears to be a singular and unchanging feature, but of course the long strip also traverses a variety of neighborhoods, whose residents see

it as part of their district. To understand the role of the corridor in the community as a whole, it is useful to begin the inventory of existing conditions by preparing a map of the residential neighborhoods, downtown(s), business parks, auto row(s), industrial districts, recreation zones, and natural preserves edged or bisected by the strip corridor (Fig. A5). This aspect of the inventory becomes especially important for portions of the corridor that require planned re-structuring. The local context map will draw attention to opportunities to create new value in older portions of the corridor by showing potential investors the values already present in contiguous districts.



For corridors that do or might feature major shopping destinations, the inventory should include a map of equivalent shopping destinations within a 5-, 10-, and 20-minute drive. It should also depict the locations of regional thoroughfares and interchanges. Civic or cultural destinations within the likely trade area should also be identified and mapped.

### 3. Economic and Market Conditions

*Retail Performance Survey.* Since the strip is first and foremost a creature of the retail industry, and since its destabilization is caused by changes in that industry’s practices, it is critical that the economic performance of the strip be evaluated to identify where and how these changes have—and have not—affected the fortunes of businesses along the corridor. If up-to-date data are unavailable, the corridor revitalization effort requires an economics study that surveys the performance of existing retail and service venues based

on taxable sales, property tax data, and other financial records from businesses along the corridor. In addition, the study should provide an analysis of rental rates and property values, as well as an inventory of broader trends—occupancy and vacancy rates, identification of portions of the corridor that have seen recent investment and portions that have seen little or no investment, and trends in rental or land purchase prices.

*Real Estate Market Analysis.* Changes in retail industry formats are a manifestation of market forces brought about by demographic, environmental, and cultural change. These factors are now combining with volatility in the financial industry (and in family spending habits) upon which the real estate industry depends. This will likely mean that the real estate product configurations that are in vogue at any given time can probably be expected to continue to evolve more rapidly than they had during earlier decades. Successful corridor revitalization planning will need to kick-start revitalization with short-term strategies that are based on an up-to-date understanding of market demand. If recent data are unavailable, the existing conditions inventory phase should begin with the preparation of an up-to-date market assessment.

The practical focus of the market study should be to provide market-based conclusions and recommendations with respect to types of real estate development products that have the greatest potential for success in the study area. The market study should evaluate the trade area demographics to provide a realistic picture of likely short- and long-term commercial and mixed-use potential. It should identify strengths and weaknesses of the corridor with respect to the most state-of-the-art commercial/retail and mixed-use industry trends. Key questions to be answered include: How much retail can realistically be supported along the corridor, and according to what kinds of retail formats? How does that amount, in current formats, compare to the available property along the corridor that is presently in retail use or zoned exclusively for commercial uses? Are there any special regional, communitywide, or local market niches that are underserved?

The economic analysis should also provide a “highest and best use” assessment of the potential value of properties that compares the potential property value for retail versus housing or office development. This analysis should separate out crossroads properties from the properties in between the primary crossroad locations. The potential to attract such investment should be studied by extending the market assessment beyond retail to cover current demand for residential, office, light industrial, entertainment, lodging, and institutional space. Potential market niches based on assets already in place should be explored. For example, the presence of a hospital would suggest some focus on the market for additional medical services.

#### **4. Vulnerability to Change**

A map of the pattern of “vulnerability to change” along the corridor is key to determining what properties (and portions of the corridor) have a higher potential for change—and thus will be the more likely locations for strategic revitalization measures (Fig. A6). Conversely, this mapping will also show where change will be unlikely or difficult to achieve. A thorough Vulnerability to Change analysis will be based on field observation and consultation with knowledgeable municipality or agency staff and checked against

economic data on existing properties if available. At a minimum, a Vulnerability to Change analysis evaluates to what degree the existing conditions and improvements on a property (e.g., buildings, paved areas, other improvements) would be likely to impede redevelopment or substantial renovation. An undeveloped or vacant site would be considered highly vulnerable to change; a site featuring an occupied, but poorly maintained, single-story older building with a surface parking lot may have moderate vulnerability to change; and a site with new, occupied, and well-maintained multistory buildings would be considered not vulnerable to change. To produce a useful strategic planning tool, it is sufficient to classify sites as “high,” “moderate,” “low,” or “no” apparent vulnerability to change.

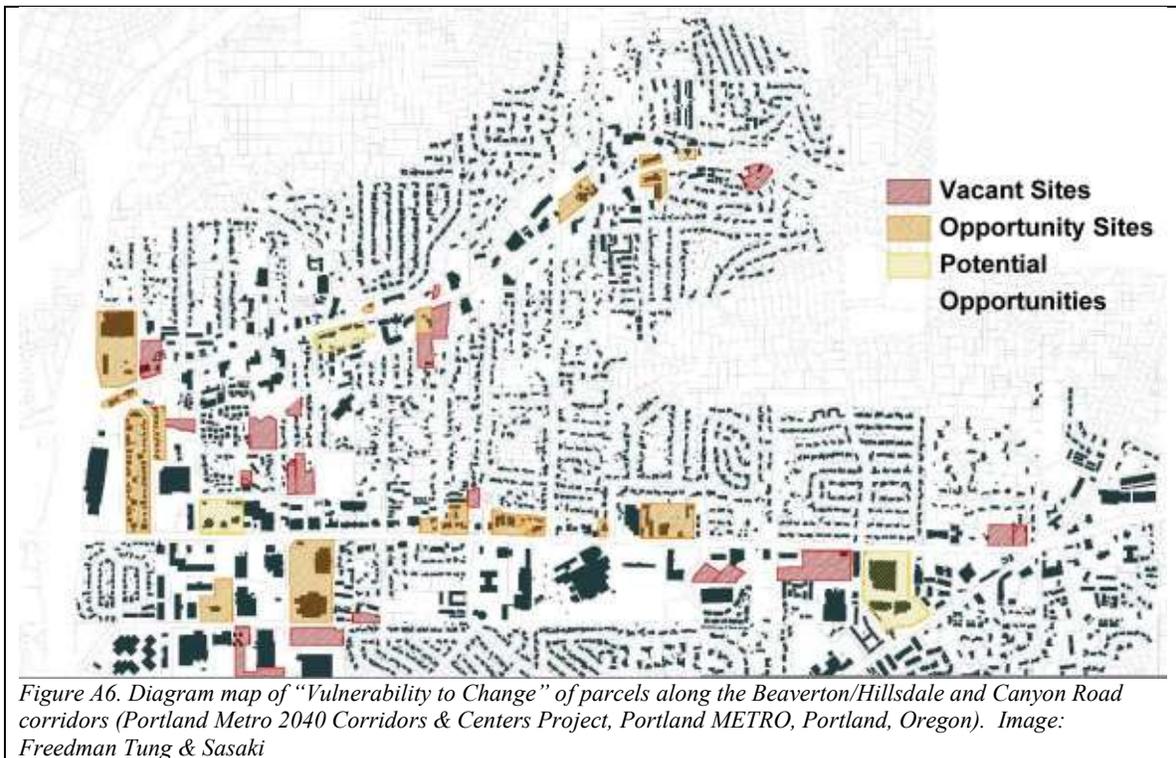
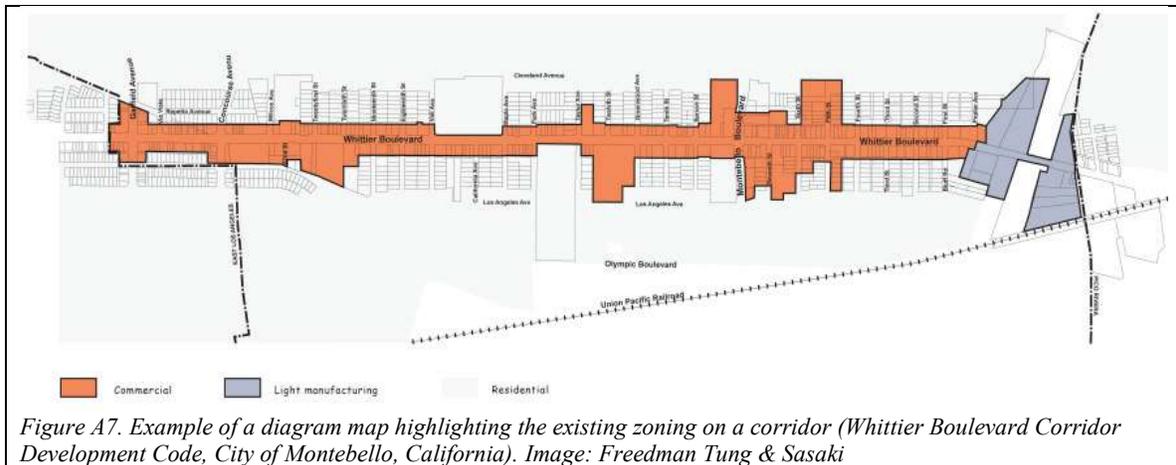


Figure A6. Diagram map of “Vulnerability to Change” of parcels along the Beaverton/Hillsdale and Canyon Road corridors (Portland Metro 2040 Corridors & Centers Project, Portland METRO, Portland, Oregon). Image: Freedman Tung & Sasaki

## 5. Land Use and Development Policy

Land use and development regulations are typically among the most powerful determinants of the form of development along the strip. Existing zoning regulations and other policies conditioning land uses, setbacks, building heights, densities, parking supply and location, and other features of physical development should be inventoried (Fig. A7).



## 6. Mobility, Access, and Connectivity

The relative success or failure of the corridor’s dual role—to provide both through-capacity for commuters and access to commercial ventures along the thoroughfare—must be carefully understood and evaluated. On the mobility side, it is important to answer such questions as: What roles does the corridor play in regional and local trips? Does the roadway fall under the jurisdiction of the state, the city, or the county? What are the major commute movements? How is traffic performing throughout the day? How do pedestrians and bicyclists experience the strip? Are the strip and its side streets easy to cross on foot? Are there safety or congestion issues that need attention? What is the present and planned role of transit on the corridor, and what is the role of the corridor in the regional transit network?

In addition to providing a clear picture of existing and planning circulation, the existing conditions phase must include an up-to-date assessment of the corridor’s capacity to accommodate existing land uses and intensities and how much, if any, residual capacity remains to accommodate additional use and intensity along the corridor. An analysis of the level of connectivity and range of alternate routes provided (or not provided) by the structure of blocks and streets in the study area is also a critical feature of the existing conditions inventory. The quantitative representation of these aspects may need to be graphically mapped by a transportation planning or engineering member of the team.

## 7. Street Design

Plan and section drawings should be prepared to illustrate typical through-lane and turn-lane configurations, the width between curbs, frequency of crosswalks, presence of medians, sidewalk width, and the typical positioning of any recurring landscaping or street furniture. Eye-level photographs that capture the character of the thoroughfare from motorist and pedestrian vantage points are especially useful for community discussion sessions. A cross-section depicting the location of all features along a typical line running perpendicular to the centerline of the corridor—that is, from building to building across the corridor—should be prepared for each existing corridor configuration. The diagram will make it easier to study the spatial proportions and recurring features of the corridor streetscape and is especially important because it illustrates how the limited space of the corridor is apportioned to moving cars, parking, people on foot or bicycle, and amenities.

## 8. Environmental/Ecological Factors

Although strips look very much the same, the natural ecosystems within which they are located vary immensely. Existing conditions inventories must be tailored to respond to these different conditions. Understanding how development on the corridor affects local water resources, for example, is an essential part of the existing conditions inventory. Since strip surfaces are dominated by pavement which increase stormwater runoff from the development, a map of impermeable surfaces (which can be derived from the map of Auto-Serving Surfaces described under “Pattern of Existing Development”) should be a standard part of the inventory. For emerging corridors in newly developing areas, the study should also include the relationship of the existing and potential corridor development to wildlife habitat zones, agricultural preserves, and other open space.

In addition to these issues, there may be more site-specific environmental factors that could have significant effects on development potential. Contaminated sites, and sites with special regulatory restrictions, such as special habitat zones, must be recorded on separate maps.

## 9. Design Context: Character and Identity

A frequent complaint leveled at strip corridors banal and “placeless.” Corridor restructuring is an opportunity for communities to make sure that the strip’s buildings and streetscapes present a flattering and memorable image. To provide a basis for future design, this phase can include a survey of the physical elements of the corridor and the community that epitomize the community’s most distinctive character (Fig. A8).

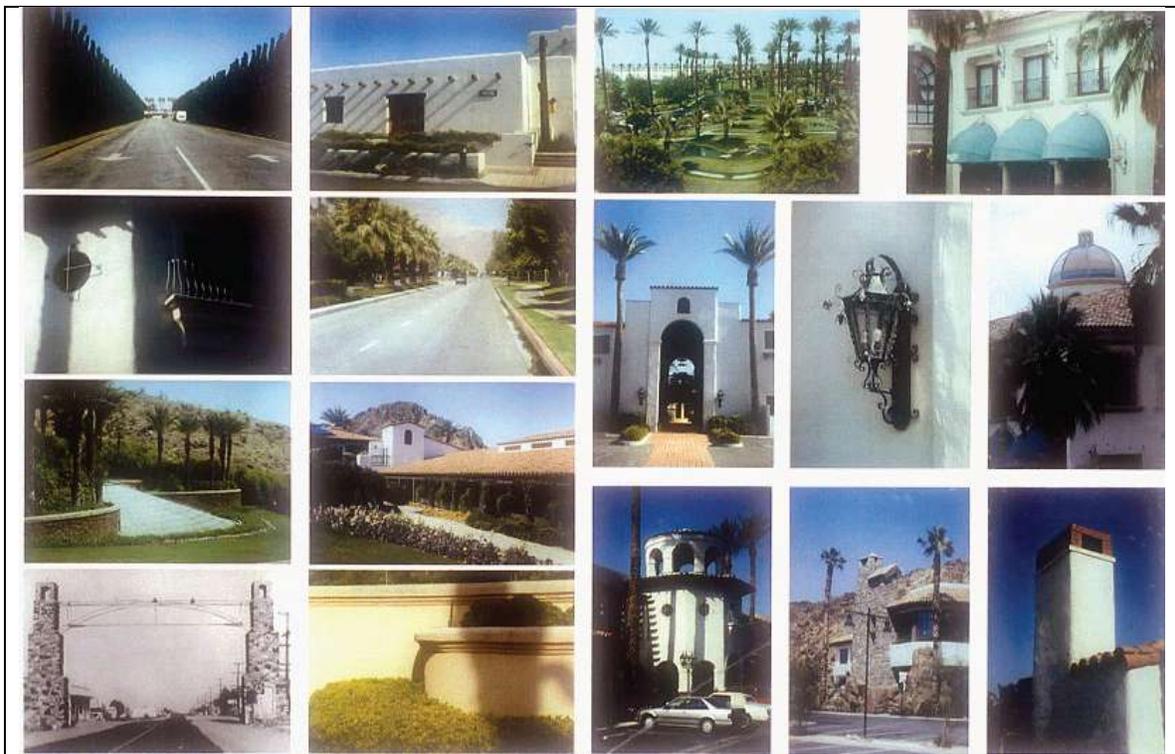


Figure A8. Example of a design context matrix of architectural and place-character photos (Downtown Revitalization Program and Precise Plan, City of Cathedral City, California). Image: Freedman Tung & Sasaki

