



# Kammerer Road Urban Design Strategies

## Elk Grove, California

January 2021



**DRAFT**

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# 1

## Introduction

# Project Vision

As the second largest city in the Sacramento Region, the City of Elk Grove has historically been a suburban bedroom community with many of its residents commuting outside of the City for employment. This has resulted in long commute periods and limited non-retail commercial development.

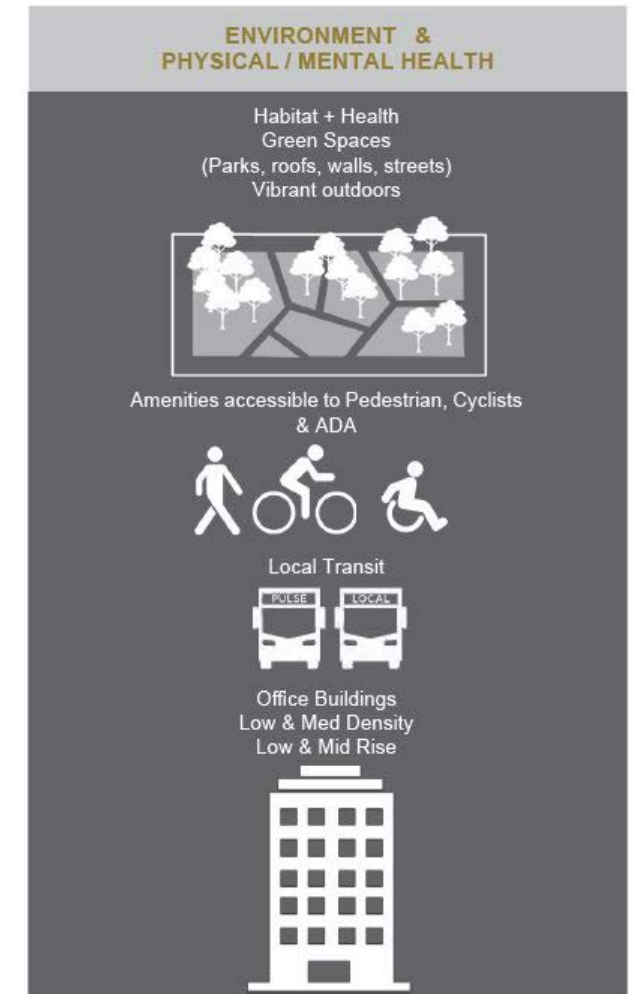
Over the last decade, the City has made extensive efforts to increase employment opportunities within the City. Some of these efforts have included business incentives, startup assistance, and other economic development programs. Additionally, the City has undertaken substantial efforts towards the development of a major employment center. The reconstruction of Kammerer Road as a major thoroughfare provides an opportunity for the City to advance these initiatives by targeting them toward the type of employment centers that will appeal to companies and employees participating in the knowledge economy of 21st century.

An explanation of that statement is in order. Last century, if one built a cluster of office parks with an acceptably large floor plate, wet and dry laboratory spaces for bio-tech and pharmaceuticals companies, sufficient fiber and communications lines for IT startups, back-up power for server farms, and open seating plans for programmers, then added a few built-in recreation spaces for the young 'creatives' and shrouded the ensemble in a swath of green infrastructure, a "high-tech" research park was born. This, in effect, was the recipe for Silicon Valley, California, a mid-to-late 20th century vision of the future, but one that is now being seriously rethought.

20<sup>TH</sup> CENTURY Drivable Employment Centers



21<sup>ST</sup> CENTURY Walkable Employment Centers



The epicenters of advanced research and application of the sciences and technologies that will survive through the 21st Century and beyond must be set in an exciting, vibrant community with great quality-of-life amenities that will attract and retain the best and the brightest in their respective disciplines.

- They are places where venture capitalists, technology entrepreneurs, creative engineers, and designers can mix and rub elbows.
- They are places where inventors and entrepreneurs can walk or bike to work, walk for lunch, and enjoy the cultural amenities of the world class cities to which they are attached.
- They are places where artists, architects, and other designers mix with one another as well as technology professionals to inspire and be inspired.

# Project Vision

## Triple Bottom-Line Approach

It is in that context that the Kammerer Road study was undertaken, i.e., leveraging the value of a new thoroughfare beyond its ability to carry vehicle traffic, but to lay the foundation for a walkable city. It is an opportunity to utilize a “triple bottom line” approach to connect transportation with land-use planning and design, because as of now, most of the area is still unbuilt. This is particularly true of the South Study Area (a potential area for annexation as laid out in the recently approved General Plan), and of the Southeast Policy Area (SEPA). While it is understood that the latter of these, SEPA, an “employment-oriented development” is seeing many of its residentially-zoned areas begin construction, the backbone infrastructure (other than NGA projects) for the employment area has not yet begun. This provides the opportunity to re-think the design of Kammerer Road, as well as the area’s backbone circulation plan to transform it from one that focuses on arterials and collector roadways, to a more finely grained network providing a higher density of intersections which is more typical of high-value, walkable urban communities.



ENVIRONMENTAL  
& HEALTH



SOCIAL &  
CULTURAL



ECONOMICAL

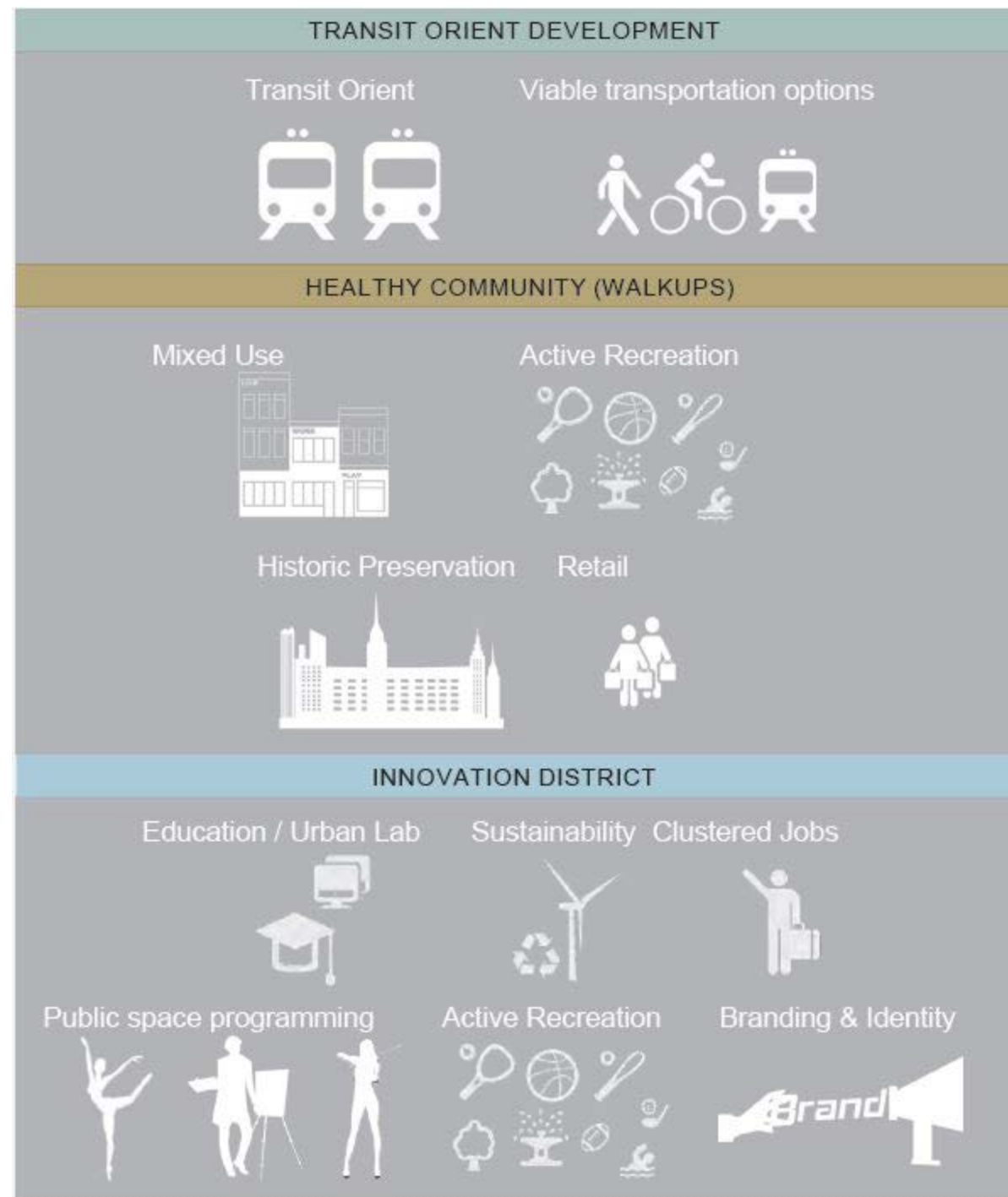
*The triple bottom line consists of social equity, economic, and environmental factors. The phrase, “people, planet, and profit” to describe the triple bottom line and the vision towards sustainable development in Elk Grove.*

# 2

## Design Principles

# Urban Style Livable Employment Centers

The Livable Employment Center has its origins in the recognition that the most economically, socially, and environmentally successful communities, are walkable. If we were designing Silicon Valley today, it would look and feel like a walkable city, albeit one with the most technologically advanced infrastructure. There is a reason that the areas leading the world in venture capital funding are walkable urban places. In the old, auto-dominated model, one drives from one business park to the next. However, in walkable urban places everything is happening within a 1-mile radius. Technology investors have argued that "It's about running into people and building relationships, because people want to work with and invest in people they know and trust." Perhaps that is why the high-tech paradises created in the 1950s and 1960s are now giant parking lots.



Successful Livable Employment Centers exist where Transit Oriented Developments (TODs), Healthy Communities, and Innovation Districts are integrated.



# TRANSIT ORIENTED DEVELOPMENT (TOD)

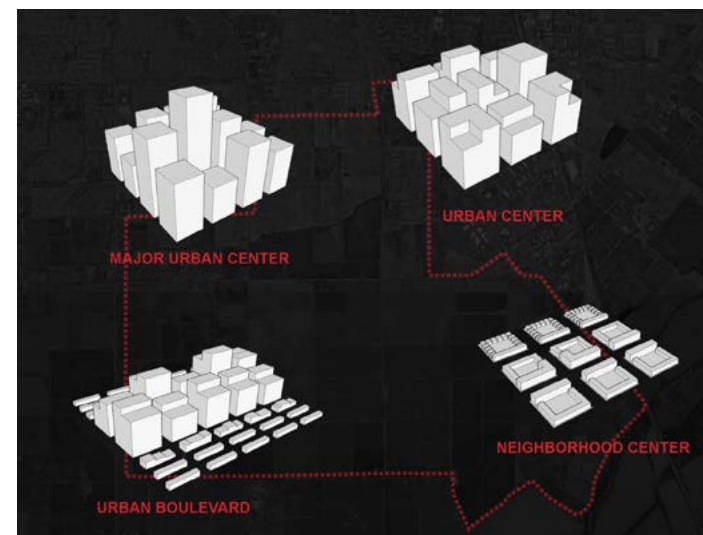
Transit Oriented Development (TOD) is a growth strategy characterized by equal parts Density, Diversity, Design, and Destination (the “four-Ds”). The ultimate objective is to bring people and businesses close enough to transportation options so that folks utilize transit from home to work, to school, to shopping and even to recreational opportunities. Each trip made this way is one less automobile on the road. Moreover, when TOD includes a healthy mix of work force and affordable housing, it is more likely that equitable access to the benefits a local economy has to offer, such as jobs, educations and social services is achieved. An increasing body of research suggests that economies are more resilient when they achieve greater access for everyone.

**DENSITY** TODs can come in all shapes, sizes and densities. What is important is that there is a finely grained mix of uses and building types supporting vibrant subneighborhoods. At the scale of the individual block, buildings or even parts of buildings might be thought of as having individual densities, some high and some low, such that when aggregated the entire ensemble provides a blended density consistent with pro forma expectations without looking monolithic. Even buildings that account for an entire block are composed in recognition of the hierarchy of streets along its perimeter as well as the scale of buildings lining those streets on the opposite side. Such mixed density and mixed compositional strategies are not necessarily simple, but very often they add intrinsic as well as economic value.

In order to meet varying market conditions, a program of graduated densities allows for the construction of lower density and less expensive

building types, further from transit stations to be constructed first, thereby preserving closer-in land for later development, when market conditions may be more supportive. Alternatively, lose-in developments may be developed to be phasable, for example, allowing surface parking in early stages, followed by a development that fills-in the parking later on, with the inclusion of more expensive structured parking scenarios.

**DIVERSITY** The Livable Employment Center is diverse and include a mix of places to work, live, learn, shop and play -- all within a walkable area. These mixed use communities are more resilient and engender collaboration - one of the hallmarks of the modern employment center. Diversity can exist along a cross-section of an entire Neighborhood (known as the transect of urbanism) regardless of who owns which parcel of land or even when it is developed. In other words, not every building needs to be mixed-use for the diversity of a neighborhood to emerge.



**DESIGN** Design does not necessarily refer to the composition of individual buildings (though that surely plays a part), but rather to the crafting of the spatial experience of the public realm. The goal here is not merely to make a project that supports transit, but to provide the envelope within which a community may flourish. In this domain, it is critical that adequate space is given to sidewalks, methodically embracing it with buildings and landscapes that are pleasant and welcoming. The street/sidewalk ensemble should be lined with buildings that are deferential to their neighbors. Such buildings that are not iconic in themselves but are hybridized and part of the fabric that frame great streets - enablers of iconic spaces.

Design also refers to the concept of “urban transparency”, where a pedestrian has the opportunity of looking, not at blank walls, parking garages or endless lengths of unbroken facades. Rather, it is a condition in which a pedestrian’s experience is continuously stimulated by views into storefronts and courtyards, or through landscapes to spaces beyond or between buildings where walkways grant access to more recessed courtyards or private spaces. Pathways and open spaces where people walk (the sidewalks, lanes and public open spaces) are appropriately shaded and scaled. At the building scale, we design to support pedestrian activity through detail that is best experienced at the speed of three-miles per hour, and those buildings have enough activity at the ground floor to create “friction,” within the pedestrian realm.

**DESTINATION** Just as every community has its own character, it follows that the very special places within and around them should be unique -- calibrated to the scale, density and aspirations of that particular community. Not only are the place’s physical characteristics significant, but so are the social and economic characteristics of the adjacent communities. Creating a memorable and appealing destination requires the adoption of unique design approaches that creatively address the issue of density, diversity and design in a site-specific manner.

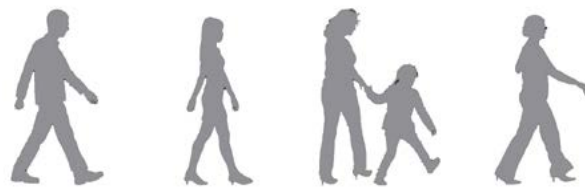
Flexibility and nuance must be built into the planning process so that, over time, a larger vision for urban form structure and movement, tailored to the place, can be realized. Ultimately, the unique ‘identity’ of a place bears the indigenous characteristics of the surrounding neighborhoods - their locations, site conditions, development characteristics and potentials, histories and communities, and natural and sustainable resources. Urban design, transportation, development program, even branding strategies, will build upon these characteristics, enhancing and strengthening them to establish high-value destinations with a powerful “sense of place”.



# HEALTHY COMMUNITIES

While cities often still reflect that preference for machine over foot, there are movements around the world aiming to change it. Cities that prioritize getting about by foot, bicycle or public transport, encourage people to interact and help communities thrive. More outdoors time improves peoples' wellbeing, and less cars on the street means fresher air to breathe.

Office, retail and housing rents being significantly higher overall in walkable postcodes, and growing faster than car-dependent suburbs, moderate income households in those places have lower transport costs and better job access than those in less walkable areas.



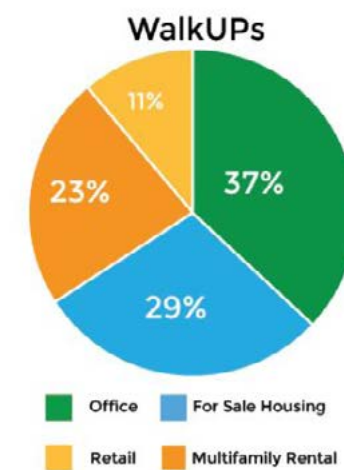
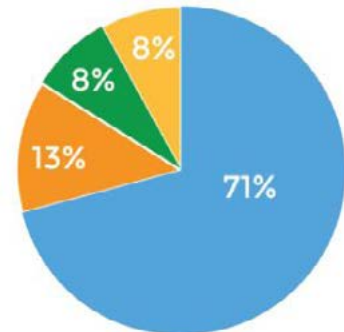
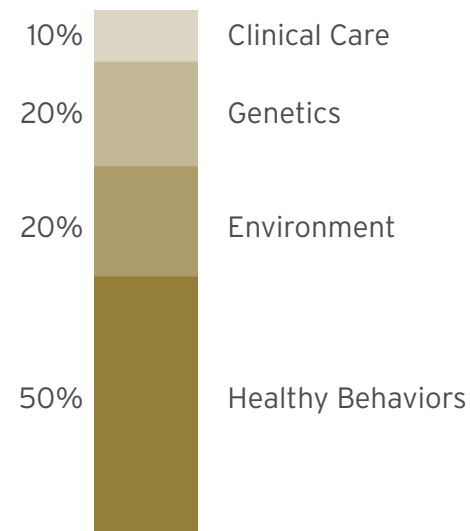
URBAN FORM CAN PROMOTE WALKING

WALKING IS HEALTHY

## UNINTENDED CONSEQUENCES OF URBAN SPRAWL :

- By 2030 Chronic Disease will Cause 52M Deaths/Year (5-Times that of Communicable Disease)
- 1 in 3 Adults is Obese
- 74% of US Adults Do Not Get Enough Physical Activity
- Physical Inactivity Contributes to Increased Risk of Obesity, Hypertension, Diabetes, Colon Cancer, Osteoarthritis, Osteoporosis, Coronary Heart Disease

## What makes us healthy?



**WalkUPs** Walkable Urban Places (WalkUPs) is a term developed around a real estate trend that saw walkable urbanism outperform (from an economic perspective) other forms of real estate throughout North America.

*Foot Traffic Ahead, Ranking Walkable Urbanism in America's Largest Metros - 2019* is the latest edition of a report that analyzes development based on whether it meets criteria for mixed-use, walkable urban centers—referred to as “walkable urban”; as opposed to automobile-oriented commercial development—which the authors call “drivable suburban.” Both of these types of development can occur in either central city or suburban locations.

The characteristics of WalkUPs are similar to those of TODs, except that high-quality transit itself is not necessarily the identifying factor. Walkable Urbanism is possible even without high-quality transit as long as the factors identified below are present:

- Compact in Size (A neighborhood is 5-minute walk from center to edge)
- Diversity of Uses
- Interconnected Street Grid with high Intersection Density
- Streets are ‘complete’
- Pedestrian Comfort is Prioritized
- Street edges are continuous (few if any breaks created by vacant lots, and surface parking lots)
- Public Realm is designed for safety



Today, amid all this talk about walkability, Leinberger and Alfonzo wanted to bring an almost scientific precision to one of the core beliefs of urbanism: the idea that cities will be stronger going into the future if they eschew “drivable suburban” for “walkable urban” development.

Sustainable and growing rental rate premiums over Drivable Sub-urban:

- Walkable urban office (90 percent)
- Retail (71 percent)
- Rental multi-family (66 percent)
- Combined = (74 percent rental)
- Premium over drivable sub-urban.

Many metros currently highest in walkable urbanism lead the Development Momentum Ranking

**PEDESTRIAN COMFORT** A pedestrian is any person walking, skateboarding, using a wheelchair or other mobility device, or any other form of human-powered transportation other than a bicycle. Motorized wheelchair users are also considered pedestrians. Many of these modes primarily travel on sidewalks and other walking facilities.

Pedestrians and bicyclists are often referred to as vulnerable users of roads because they do not have the protection provided by an automobile, though this can be improved by offstreet trails or on-street separated bikeways. This is especially true for children, seniors, and those with disabilities, who may require additional time or unique information to use and cross roads safely.

*The California Transportation Plan 2040* (CTP 2040) is Caltrans' overarching long range transportation plan that identifies the state's sustainable multimodal transportation system. *Toward an Active California - State Bicycle and Pedestrian Plan* seeks to fulfill the six goals laid out in the CTP 2040. *Toward an Active California* also aims to achieve goals and targets set in the Caltrans Strategic Management Plan, including:

- Double walking, triple bicycling, and double transit by 2020
- Reduce bicycle and pedestrian fatalities by ten percent per year
- Increase the number of complete streets projects by twenty percent

<p><b>SAFETY</b></p> <p><b>Reduce the number, rate, and severity of bicycle and pedestrian involved collisions</b></p>  <p><b>PRESERVATION</b></p> <p><b>Maintain a high quality active transportation system</b></p> 	<p><b>MOBILITY</b></p> <p><b>Increase walking and bicycling in California</b></p>  <p><b>SOCIAL EQUITY</b></p> <p><b>Invest resources in communities that are most dependent on active transportation and transit</b></p> 
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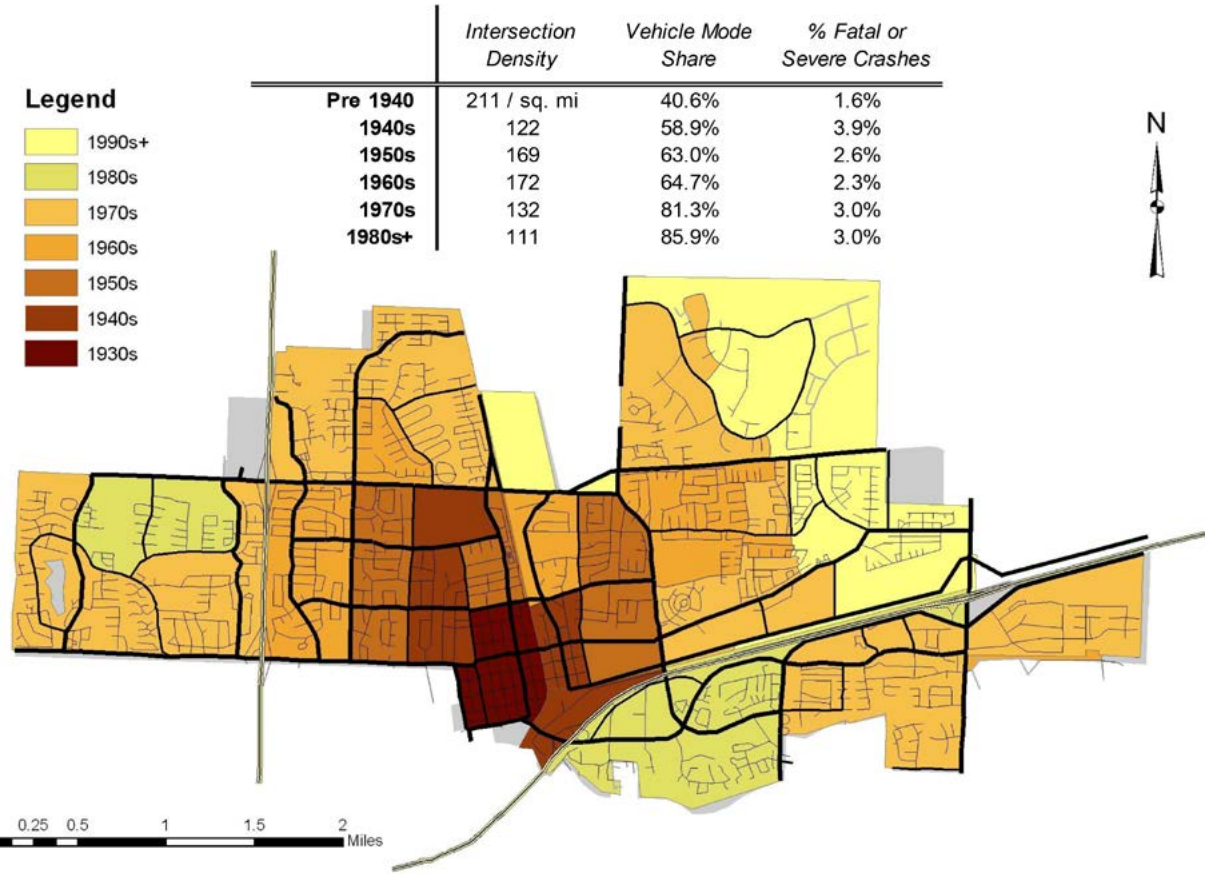
**PARKING RATIOS** Most cities and financial capital providers and lenders require conventional parking ratios (i.e., based upon the Institute of Transportation Engineers' Parking Generation Manual) in transit oriented developments. These outdated expectations are often held despite a study from the Urban Land Institute's Center for Transit Oriented Development that found that TODs produce half as many vehicular trips as conventional development. Some cities have studied actual parking patterns in their cities and determined that parking occupancy is considerably less than their codes required. For many years, the city of Palo Alto required four spaces per 1,000 square feet of commercial space, when actual observed peak demand was only 1.91 spaces per 1,000 square feet. If Palo Alto, which has the highest density of startup companies in the nation (startups/sq.mile), had kept said requirement, 5,210 more spaces would have been needed, creating a construction burden of more than \$298 million (at the local cost of \$51,000 per space). The impact would have been to drive up already high-rents, reducing the city's appeal to startups and employers.

Parking strategies become increasingly difficult at higher densities, but solutions based on careful layout and planning can minimize the effects on the public realm. Though highly desired, structured parking is rarely an option in the initial phases of a pedestrian-oriented development particularly when it must begin its life competing with conventional suburban prototypes. Local government cooperation can help through bond measures or Enhanced Infrastructure Financing Districts (EIFDs) but it is often left to urban designers to creatively manage parking without financial assistance, and without the initial option of structured parking.

**INTERSECTION DENSITY** Intersection density is the number of intersections in an area. It corresponds closely to block size - the greater the intersection density, the smaller the blocks. Small blocks correlate with walkable urban places because the short block size provides walkers with numerous opportunities to vary their route, to investigate interesting activities or features, and to shorten or lengthen their walk without retracing their steps along the same roads. In contrast, in hierarchical street networks with curvilinear streets and cul-de-sacs, walkers have fewer route options, opportunities to change direction are some distance apart (and often out of sight around curves), In addition, such loop and cul-de-sac patterns will typically require travel on an arterial road to reach geographically close locations, which in most cases are designed not to be pedestrian friendly. Though intersection density is just one facet of walkability, it is an important one.

Studies have found increased traffic collisions in neighborhoods with large arterial roadways. These designs are more dangerous for motorists as well as pedestrians and cyclists, when compared to pedestrian-oriented street networks, where frequent cross traffic encourages slower and more cautious driving. A study of 24 medium-sized California cities (including Davis and West Sacramento) found that safer cities with 1/3 the traffic fatalities of less safe cities, had double the intersection density. Moreover, they had larger percentages of people walking, biking and using transit than less safe cities.

Intersection density also seemed to play a role within a city not just between different cities. An analysis of Davis, CA showed, that areas of town with the highest intersection densities, had half as many traffic fatalities as those areas with the lowest densities.



	Safer Cities	Less Safe Cities
<b>Population</b>	56,719	59,845
<b>Population Density</b>	5,736 per sq. mi.	2,673 per sq. mi.
<b>Real Intersection Density</b> <small>(does not include dead ends)</small>	106 per sq. mi.	63 per sq. mi.
<b>Mode Share</b>		
Driving	84.1%	95.8%
Walking	5.4%	1.7%
Biking	4.1%	0.7%
Transit	6.6%	1.7%
<b>Total Road Fatalities per 100,000 pop.</b>	3.2 per year	10.5 per year

Research has shown that of all the built environment measurements, intersection density has the largest effect on walking – more than population density, distance to a store, distance to a transit stop, or jobs within one mile. Intersection density also has large effects on transit use and the amount of driving. In other words, intersection density is the most important factor for walking and one of the most important factors for increasing transit use and reducing miles driven.

Finally, research indicates that higher street intersection density has environmental benefits. Numerous studies have shown that people living in neighborhoods with higher street intersection density tend to drive less and walk and take transit more. A recent study found that vehicle miles traveled are most strongly associated with accessibility to destinations and with street network design variables.

# INNOVATION DISTRICTS

Innovation districts are zones in cities where public and private actors work to attract entrepreneurs, startups, business incubators, generally with the aim of revitalizing depressed downtown areas. The first, 22@ in Barcelona, Spain, was launched in 2000; as of 2019, there are more than 80 worldwide.

**ANCHOR TENANTS** The presence of a major anchor user can catalyze absorption of employment center uses. Often the presence of a major institutional user (education, medical, etc.) is a major factor in terms of generating technology transfer opportunities and spin off employment as well as producing a workforce with employer-desired skills and attributes. Where institutional users are not present, “micro-institutions” or an agglomeration of related industry users may emerge to drive the growth of employment uses.

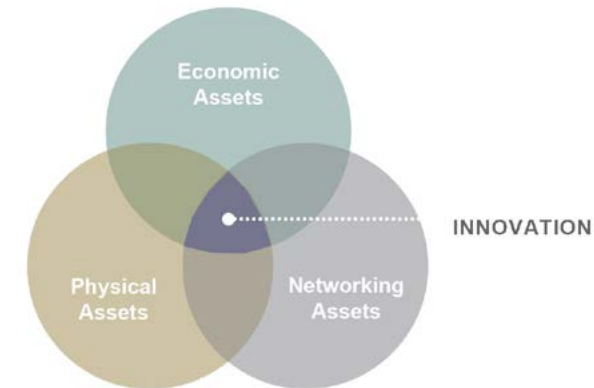
## TRENDS FOR INNOVATION DISTRICTS

- Strong Identity & Sense of Place
- Collaborative
- Institutional Relationships
- Mixed use
- Commercial & Retail opportunities
- Networking assets
- Vibrant & artistic outdoors
- Walkable
- Diverse Amenities
- Diverse pop ups



**“The trend is to nurture living, breathing communities rather than sterile remote, compounds of research silos.”**

Pete Engardio, “Research Parks for the Knowledge Economy,” Bloomberg Businessweek



# Key Strategies

Four key strategies will be critical to realizing the sort of positive change that is envisioned for the Kammerer Road corridor:

- **Mixed-use development** patterns - both horizontal and vertical mixes - can bring daily necessities within and easy walk of many residents, reducing stress on transportation systems;
- Mixed-use patterns support **economic development** by generating new value in properties undergoing change, and can help attract new employers, and employees, to live, work, shop and play in the centers along Kammerer Road;
- Multi-modal **connectivity** between adjoining neighborhoods and activity centers is key to unlocking the value of mixed-use infill development, which builds value by offering convenient access to nearby jobs, housing, recreation and commercial amenities;
- **Placemaking** is the payoff and the value-added for connected, mixed-use development. By carefully coordinating public circulation and open space networks with existing and new private development, each new increment of infill creates new value, and adds value to surrounding, connected neighborhoods and properties.





**MIXED-USE AND ECONOMIC DEVELOPMENT** The existing predominant land use along Kammerer Road is agricultural. However, there is a long term plan to develop Kammerer Road, both through road improvements and development of the properties. There is a plan in place to connect State Route 99 to Interstate 5 using Kammerer Road. The development will bring office space along with retail and residential. The corridor along Kammerer Road will also benefit from the fixed transit corridor that connects to the City of Sacramento.

Under this plan, development in the Kammerer Road corridor is envisioned with a more urban characteristic that incorporates multi-story development with strong pedestrian and other multi-modal infrastructure.

The intent is that there be a transition of development typology over time. The character of development will transition from a more suburban to urban development over time as market conditions support, and as infrastructure becomes available. The fixed transit corridor will help anchor the development of the centers.



**CONNECTIVITY** While the efficiency through movement of vehicular traffic is clearly a high priority for major crosstown corridors such as Kammerer Road, so too is all mode access to and free movement of people between uses along the corridor. Limiting access and turning movements to enable high volumes and speeds of through traffic in the interest of better crosstown connectivity can have the localized effect of separating and disconnecting commercial and residential areas along and across the corridor.

Accordingly, a key objective of this corridor study is to define balanced mobility, development and use patterns for the corridor that enable and encourage movement by all travel modes between properties and uses along each side of and across Kammerer Road. And to define use patterns and multi-modal local street networks that enable and encourage short local trips, with and without driving, for many daily activities, driving down vehicular travel demand in relation to economic activity.



**PLACEMAKING** At an even higher level, an overarching urban design objective of this effort is to outline a set of policies, priorities, standards and guidelines for Kammerer Road and adjoining areas that will enable the area to evolve from a highway cutting through town to an iconic civic space that further develops Elk Grove. Thereby evolving Kammerer Road from a rip in the urban/rural fabric to a zipper.

In mixed-use environments - and in traditional, walkable American neighborhoods that normally surround and connect to mixed-use areas - the streets that provide the necessary connectivity between uses are also the primary public spaces within which social, economic and civic activity take place. Whereas the streets in many parts of most communities function simply as the routes one drives from housing tract to housing tract, from office park to office park, or shopping

center to shopping center, the street networks of the most valuable city centers in the region are the neighborhood streets where neighbors meet and socialize, the shopping streets with sidewalk cafes, lively plazas and restful parks, and office districts with restaurants for breakfast, lunch and dinner meetings and hotels and housing a comfortable walk or bike ride away.

Planning and designing these types of high value places where a variety of uses are integrated into walkable, human-scale places is often referred to as "place-making". It is integrated land use planning, circulation and parking planning, community design, zoning, and design guidelines, prepared ensure that as land use intensities in designated centers are increased, surrounding neighborhoods reap the benefits while being protected from potential negative impacts.

# 3

## Design Framework

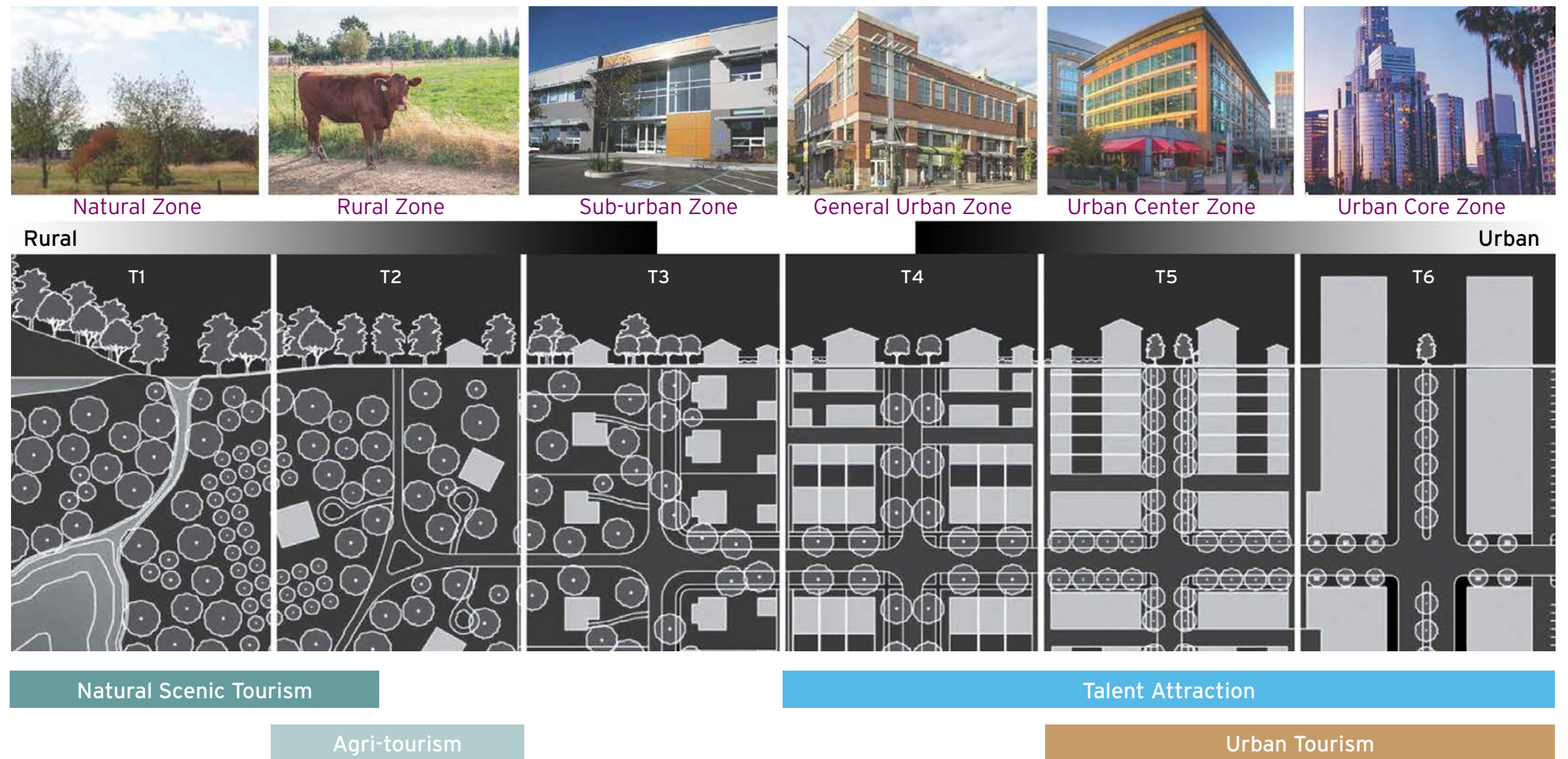
# Transect of Urbanism

The transect defines a series of zones that transition from sparse rural farmhouses to the dense urban core. Each zone is fractal in that it contains a similar transition from the edge to the center of the neighborhood.

Dense cities are the most economically efficient, the most environmentally sustainable and that they encourage joyful and healthy lifestyles.

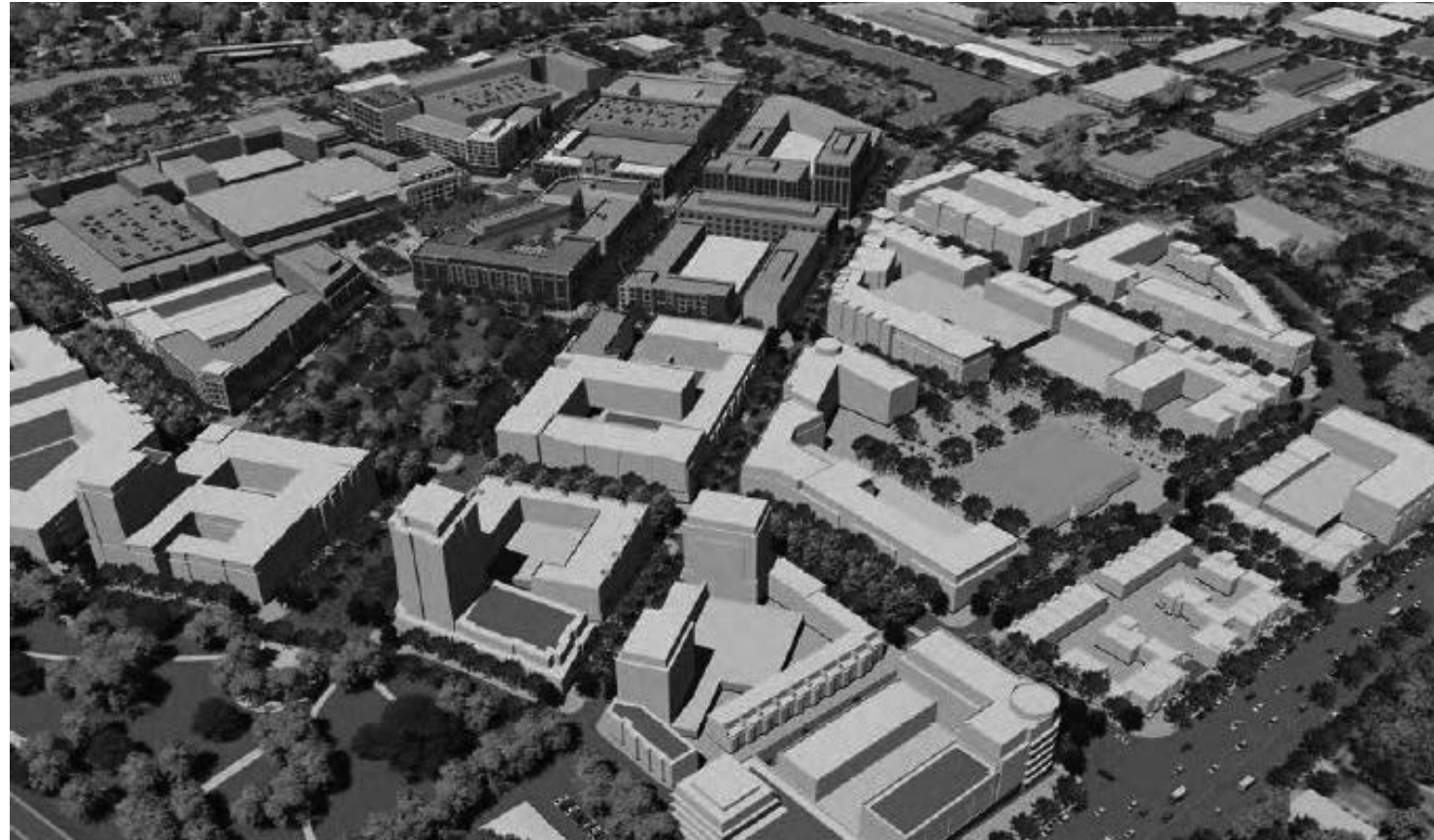
The aim is not to create a density mix similar to a downtown but to reimagine the typical low rise and low density suburban neighborhoods with a more densified suburban neighborhood to achieve more units per acre, a more walkable neighborhood, a possibility to include amenities and introduce transit, and require less surface parking lot areas, etc.

The study area is currently within T3 zone and is aimed to be reimaged to broaden its zone typology towards T4 and T5 with a mix of live work and amenities of different density and height to respond to the characteristics that would create a vibrant, attractive community that can attract top talent.





# LAND USE



Land Use Mix



Access to Larger Job Market



Anchor Tenants

## LAND USE MIX

Include a mix of uses (both horizontally and vertically) that includes employment generating uses, experiential retail and entertainment amenities, convenience retail (grocery/ pharmacy) hospitality and conference center facilities, and housing. Integration of a variety of residential uses at various densities is a particularly critical component of successful districts. Lower density industrial/flex uses are typically positioned on the edges of the planning area.

## LAND USE DENSITIES

Most urban-style employment centers utilize a form-based code with minimum FARs that vary by location with densities increasing towards the center of the planning area and many do not place any height restrictions on development. Residential density minimums are typically 20 units per acre.

## ACCESS TO LARGER JOB MARKETS

Urban style employment centers in a suburban context tend to benefit from access to larger job markets, with major employment centers and business districts typically located within 10-20 miles.

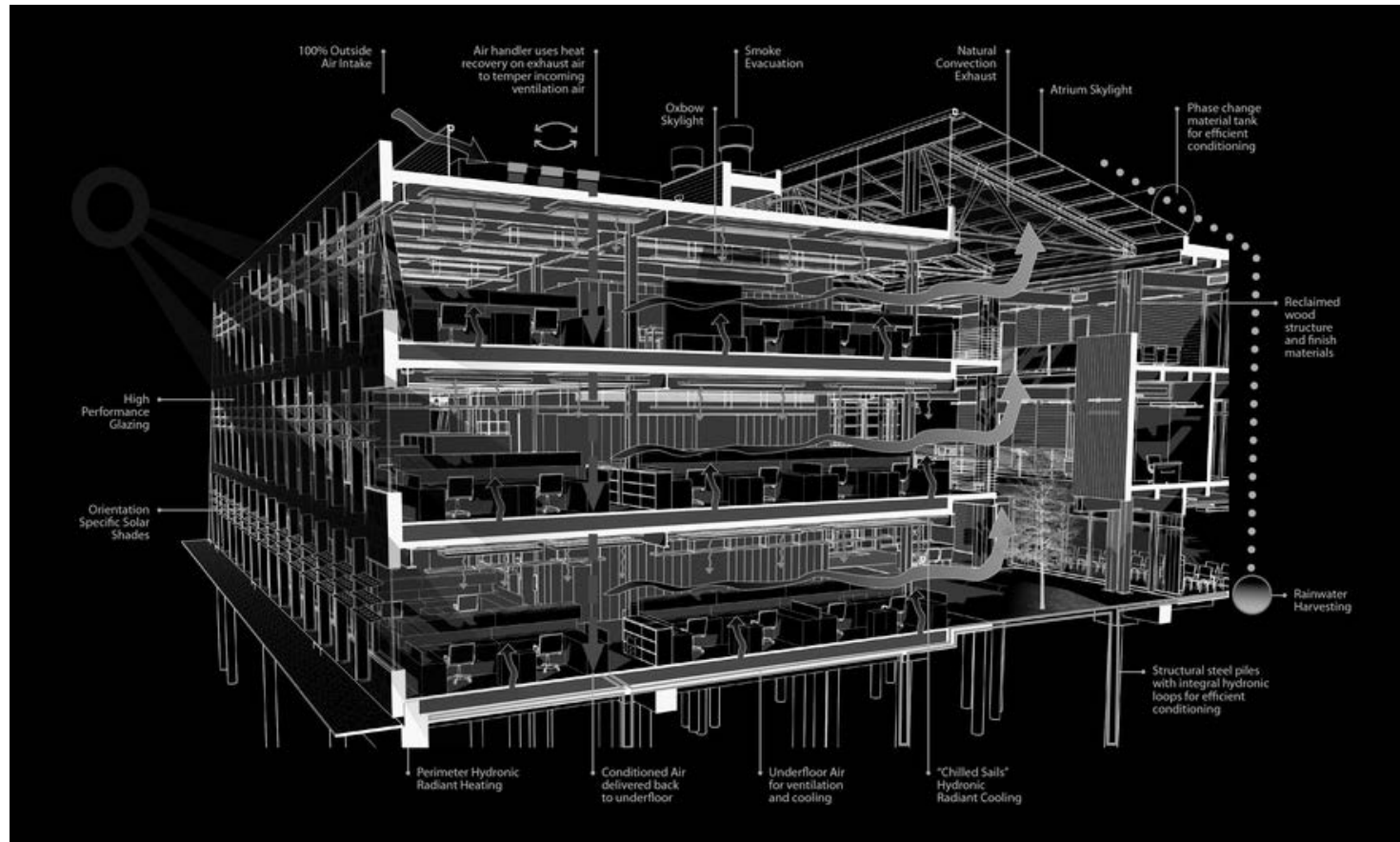
## RENTAL PREMIUMS

Successful urban-style employment centers are typically able to secure rental premiums ranging from 15 to 50 percent over traditional suburban development with vacancy rates falling between 1 to 10 percentage points lower than traditional suburban development. Developers also benefit from lower land acquisition values as compared to major employment centers in an urban context.

## ANCHOR TENANTS

The presence of a major anchor user can catalyze absorption of employment center uses. Often the presence of a major institutional user (education, medical, etc.) is a major factor in terms of generating technology transfer opportunities and spin off employment as well as producing a workforce with employer-desired skills and attributes. Where institutional users are not present, "micro-institutions" or an agglomeration of related industry users may emerge to drive the growth of employment uses.

# BUILDINGS



## SUSTAINABLE ARCHITECTURE

Seek to minimize the negative environmental impact of buildings by efficiency and moderation in the use of materials, energy, and development space and the ecosystem at large, and use a conscious approach to energy and ecological conservation in the design of the built environment.

## RENEWABLE ENERGY

Renewable power is the backbone of any development that aims to be sustainable. The ability of renewable energy to compete effectively against the older fossil fuel technologies is coming as a result of consistent falls in the cost of new plants. The most attractive renewable energy sources, from a cost perspective, are onshore wind and solar PV.

## GREEN PARKING LOTS BENEFITS

They improve water quality. Increase groundwater supply. Reduce the urban heat island effect. Less heat generated. Re-absorption of water into the ground for recharge. Remove sediments and other pollutants. Provide effective storm-water management.

## GREEN ROOFS

A green roof or living roof is a roof of a building that is partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane. It may also include additional layers such as a root barrier and drainage and irrigation systems.

## DAYLIGHTING

Daylighting has been touted for its many aesthetic and health benefits by designers and researchers alike. Utilizing natural light can lead to substantial energy savings. Electric lighting in buildings consumes more than 15 percent of all electricity generated.



Daylighting

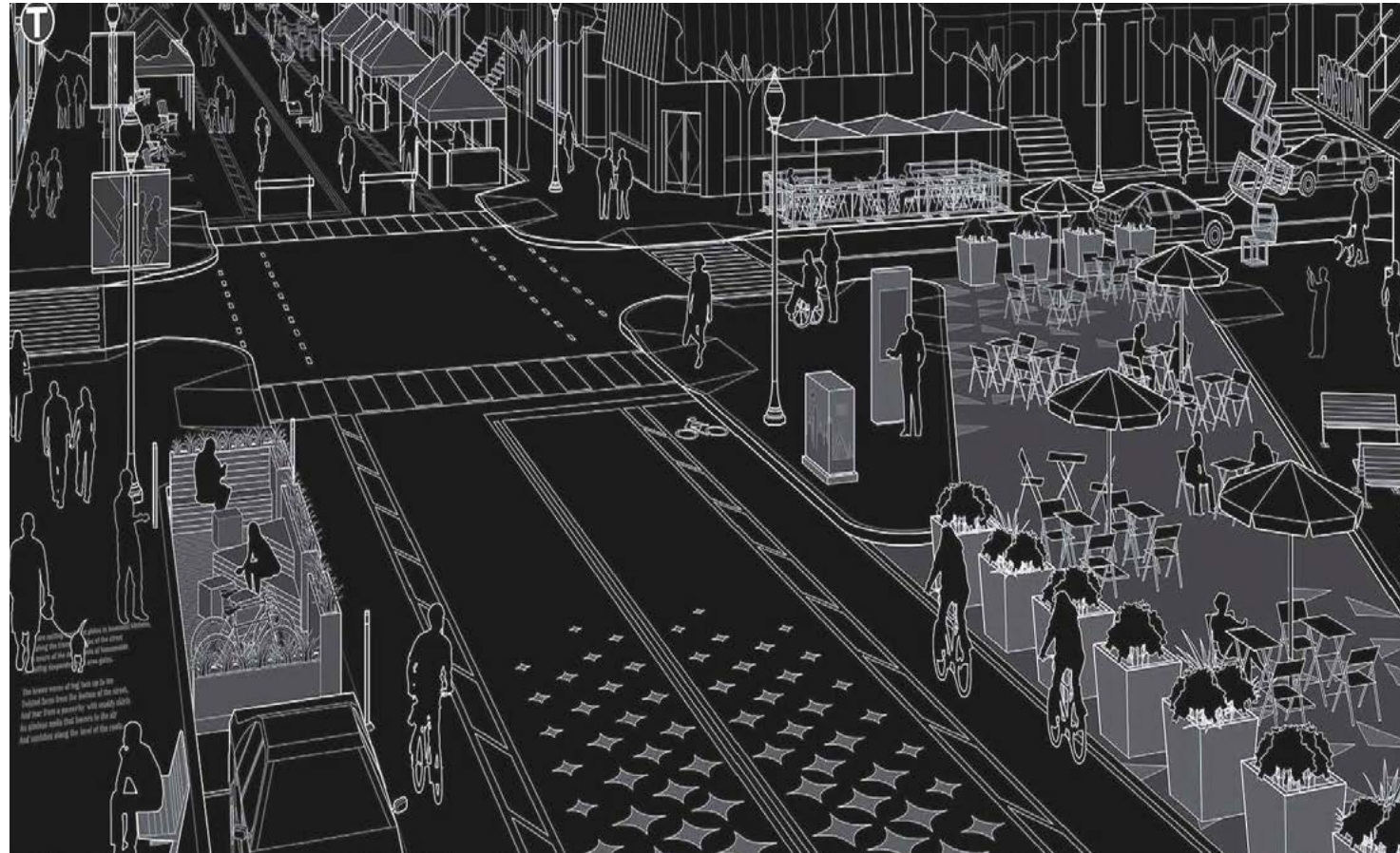


Renewable Energy



Green Roofs

# PUBLIC REALM



## PARKS AND PUBLIC SPACES

Most districts integrate a central park and public space that can be used by workers, residents, and visitors alike. The space can host weekly farmers markets, concerts, festivals, holiday events, etc.

## PARKING

Minimum FARs will discourage surface parking. District-wide parking strategies (e.g. offsite parking structure) can help individual projects minimize costs associated with structured parking.

## PLACE MAKING, BRANDING & IDENTITY

Elk Grove's agricultural history remains a strong part of the community's identity, in spite of the reduced amount of agricultural land in the Planning Area. The aim is to identify the character and identity of neighborhoods, protecting historic and cultural resources, promoting arts and culture, providing public open spaces and recreational facilities, and conserving the environment and natural resources. The City's identity and brand, and its sense of place is to make it an appealing destination to live, work and visit and to include recreational opportunities, higher education, job centers, and quality neighborhoods.



Meeting Nodes & Plazas

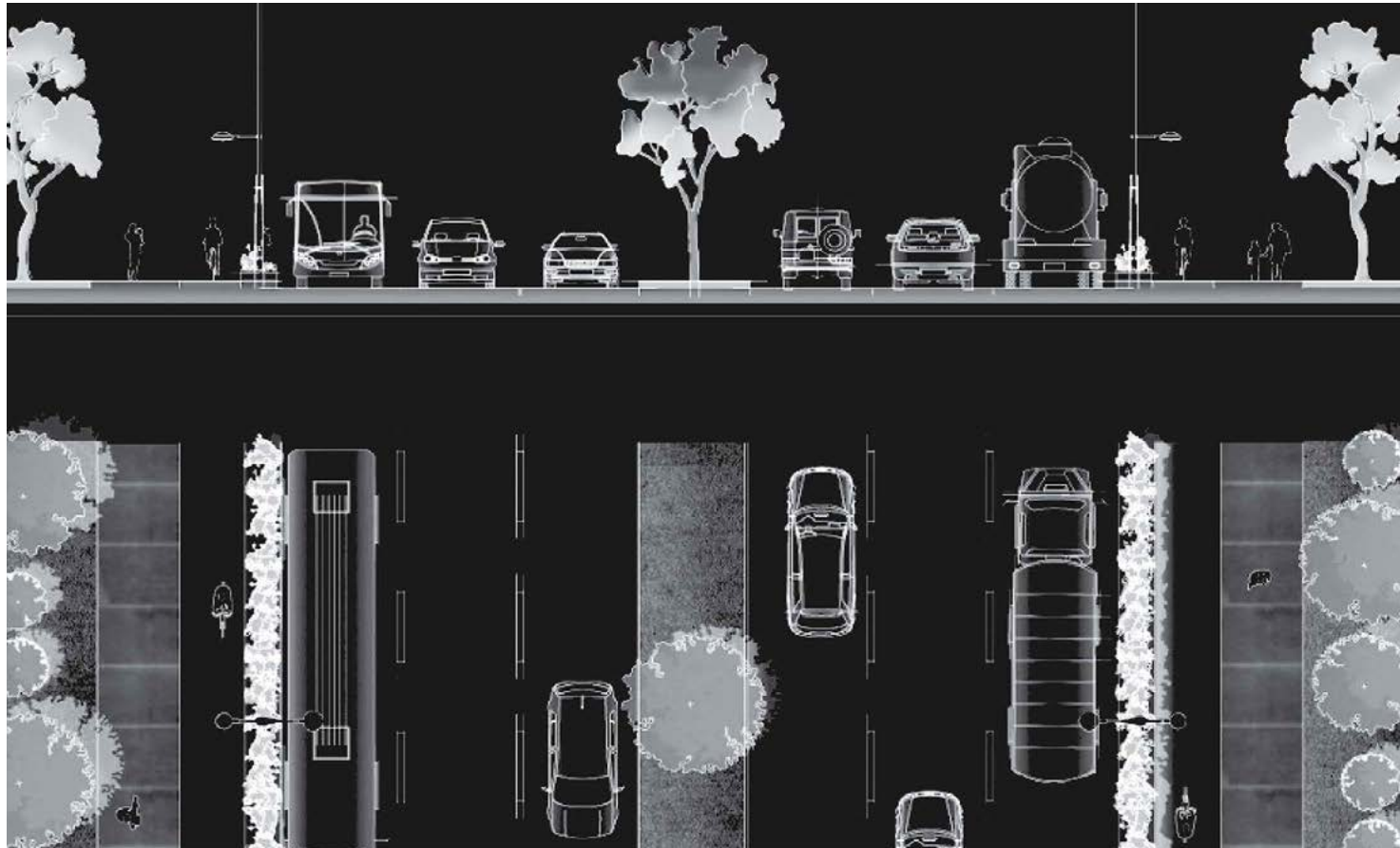


Themed Public Artwork



Sense of Belonging

# STREETS



## ACCESS TO ALTERNATIVE MODES OF TRANSPORTATION

Bus rapid transit and/or commuter rail, bicycle and pedestrian improvements are typical, including links to larger regional trail and bicycle networks. Best practices include infrastructure to accommodate ride-, bike, scooter-, and car-sharing.

## COMPLETE STREETS

Thoroughfares designed and operated to enable safe use and support mobility for all users. Those include people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians, bicyclists, or public transportation riders. (ADA compliant)

## PEDESTRIAN-PRIORITY

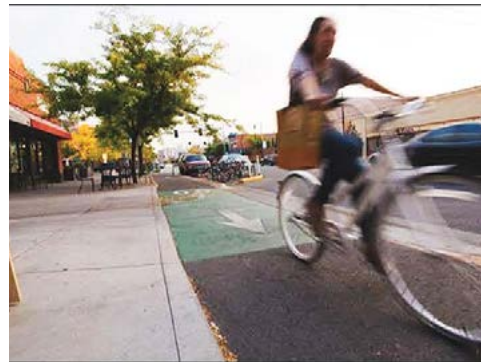
A shared street is often referred to as a “pedestrian-priority street,” or, in residential areas, as a “home zone.” They are usually local-access, narrow streets without curbs and sidewalks, and vehicles are slowed by placing trees, planters, parking areas, and other obstacles in the street.

## DESIGNATED BIKE LANES

Protected lanes for cyclists mean safer roads for people on bikes and people in cars and on foot which consequently motivates residents and workers to cycle more.



*Pedestrian Priority*



*Separated Bike Lanes*

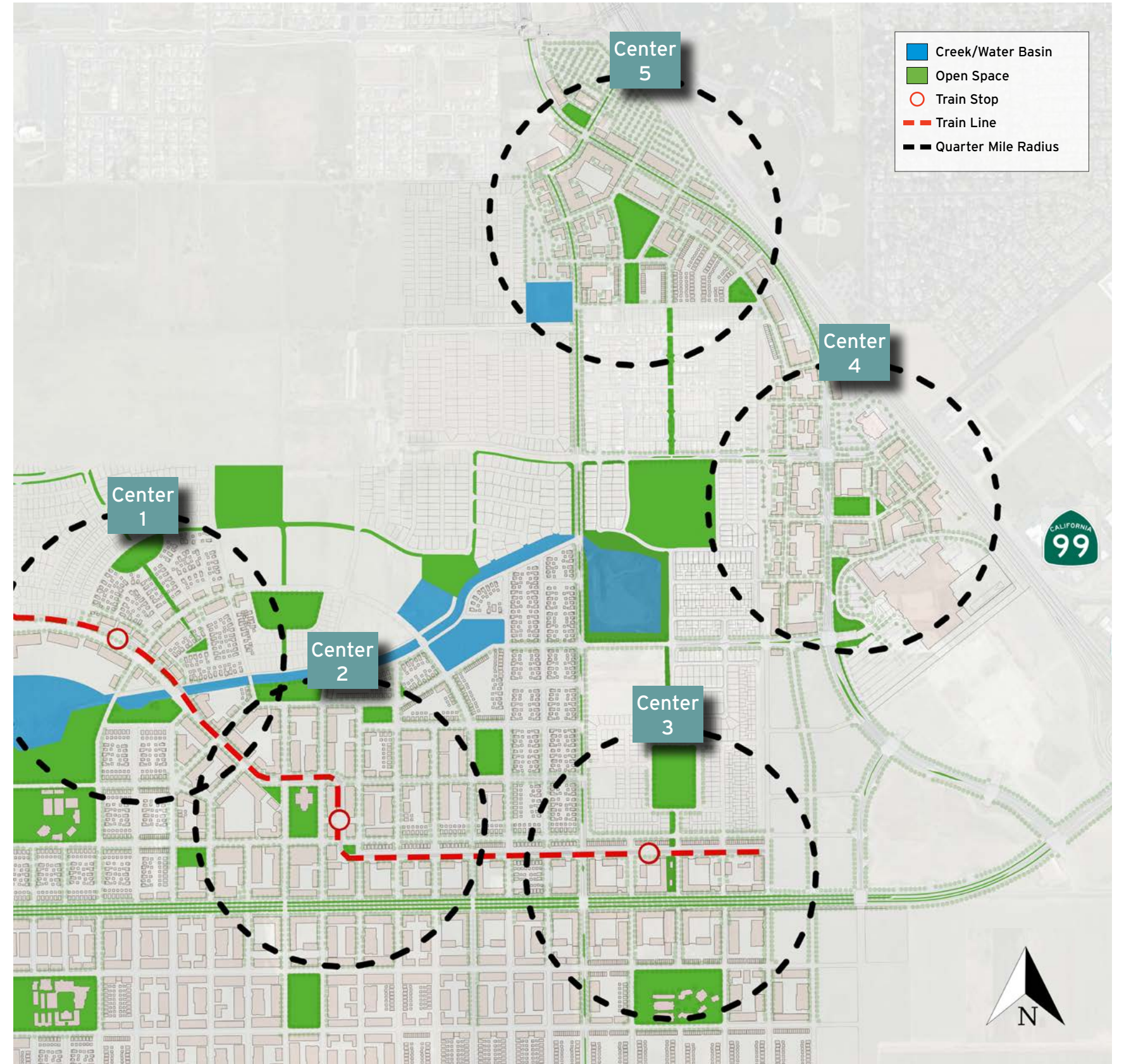
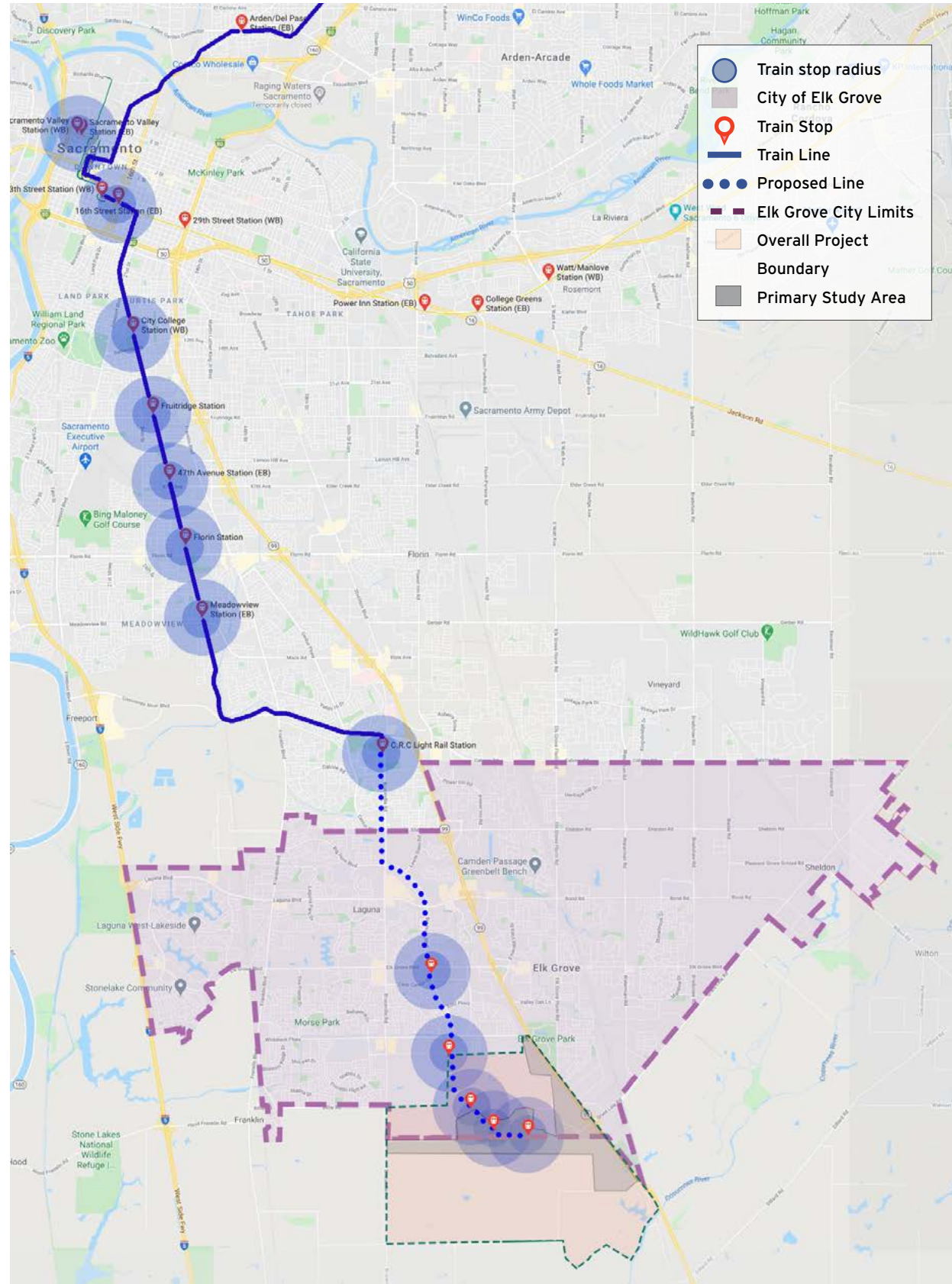


*ADA Compliant*

# 4

## Design Strategies

# Regional Connectivity

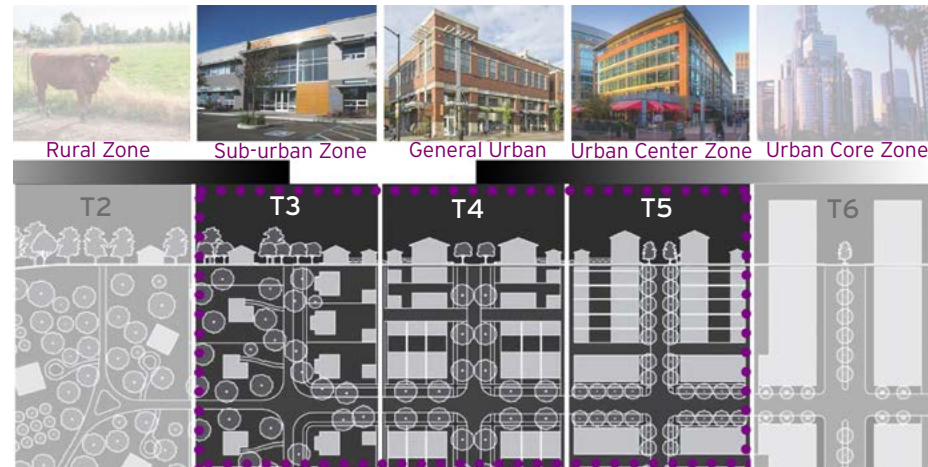


# Transect of Urbanism

The transect defines a series of zones that transition from sparse rural farmhouses to the dense urban core. Each zone is fractal in that it contains a similar transition from the edge to the center of the neighborhood.

The study area is currently within T3 zone is aimed to be reimagined to broaden its zone typology towards T4 and T5 with a mix of live work and amenities of different density and height to respond to the characteristics that would create a vibrant, attractive community that can attract top talent.

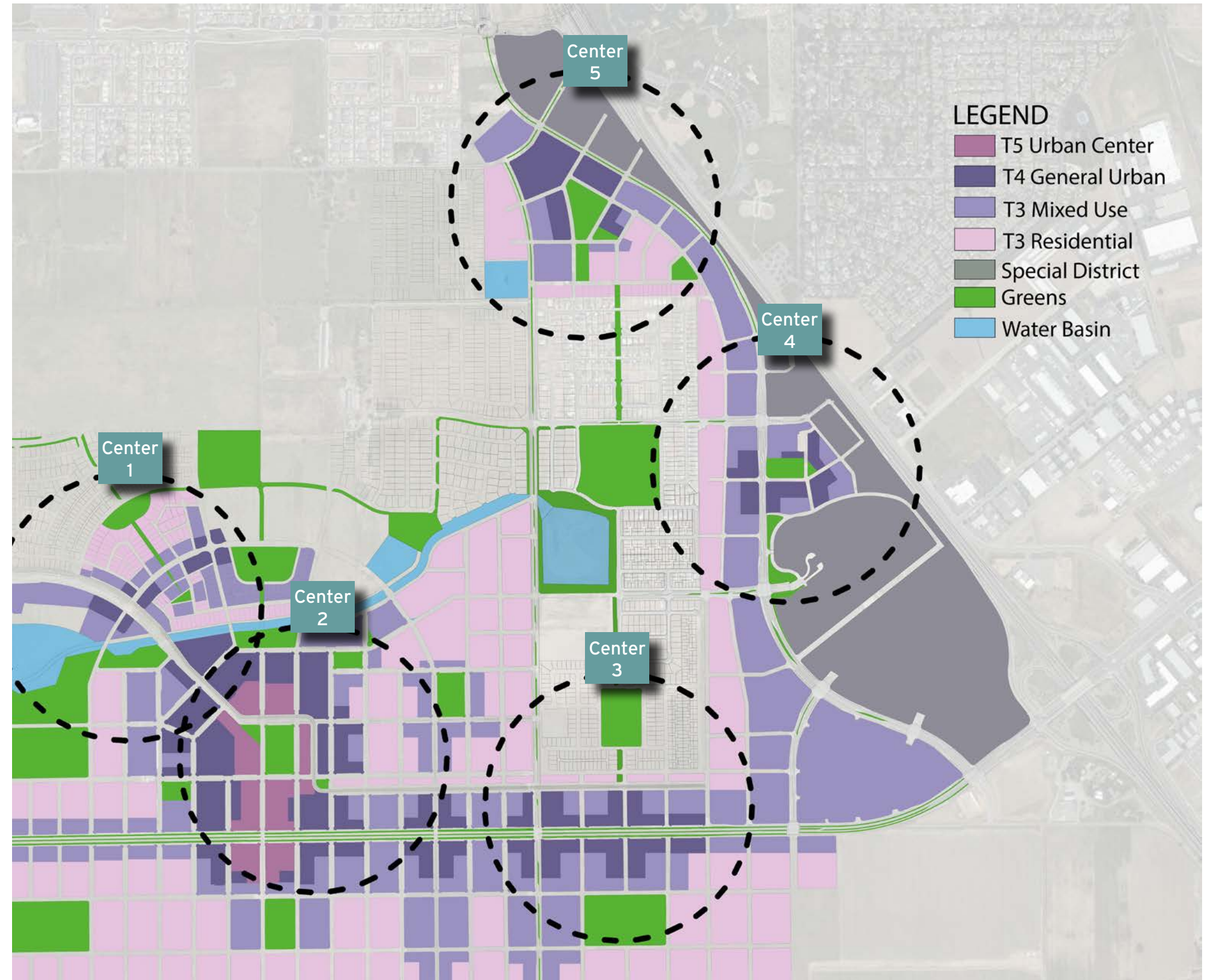
## BROADENING THE ZONE



Low Density low rise individual building commercial may include retail surface Parking lot (front) may include store front

Med Density low rise commercial & residential surface Parking lot (back) facing public realm may include store front

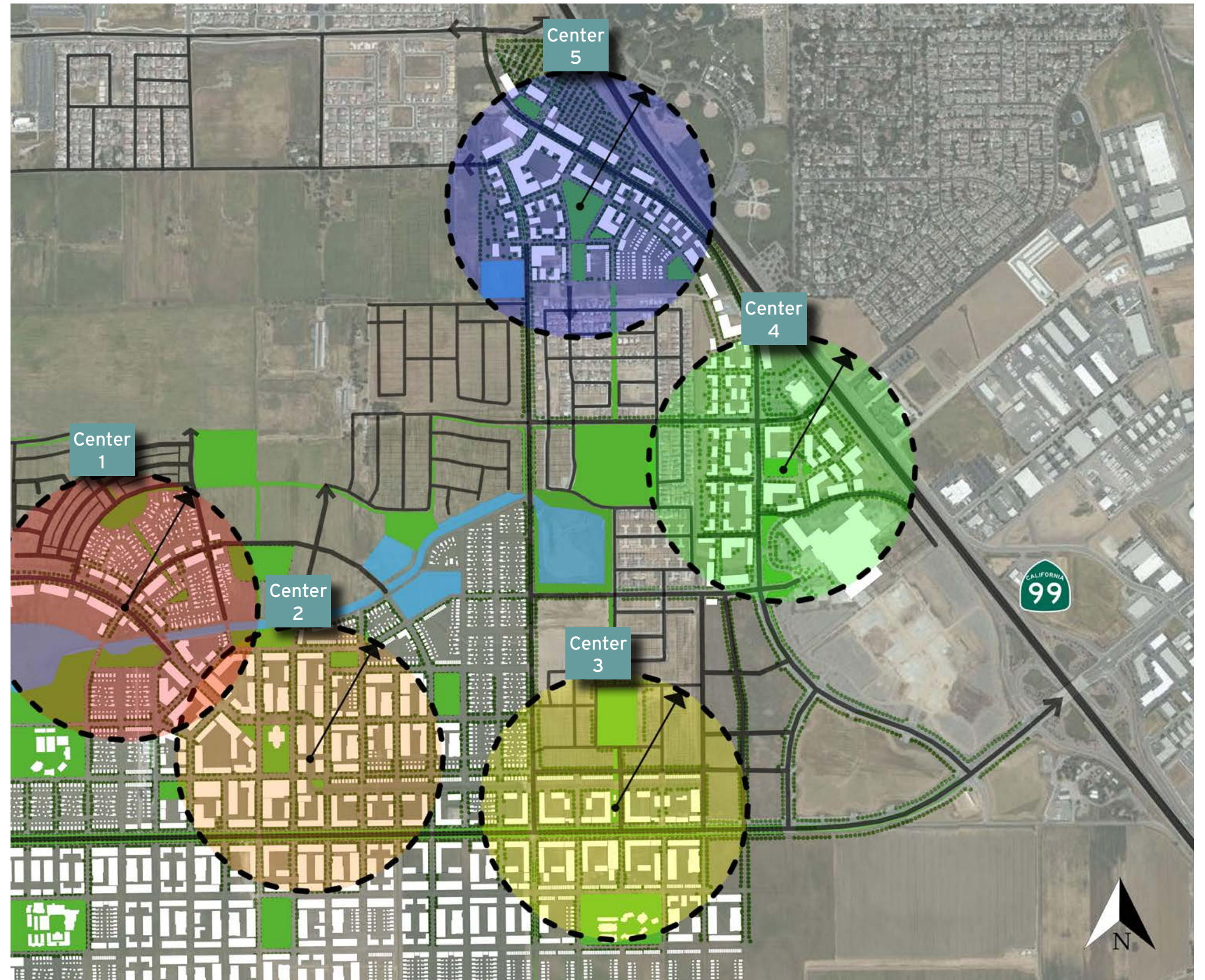
Med Density mid rise mixed use may include residential & recreational Parking structure facing public realm store front lower building footprint



# Physical Setting

## CORRIDOR ORGANIZATION & STRUCTURE

It is the nature of urban corridors that some urban design characteristics are consistent throughout the corridor, providing useful continuity, while other characteristics vary as one passes through different parts of town. The role of an urban street corridor is to provide clarity and continuity of movement through the city, while also ensuring that the roadway and adjacent private development participate in and contribute to the activity, economy, and design character of each part of the city that it passes through. Accordingly, the conceptual corridor map illustrates a recommended organization and structure of neighborhood areas and mixed-use centers in relation to Kammerer Road and the existing and proposed street network development patterns.





Each of the sub-areas identified are described in more detail in the following sections. In terms of existing land use and circulation patterns, opportunities and strategies for positive change, and illustrations of recommended urban patterns, public space, and building forms. Sub-areas include:

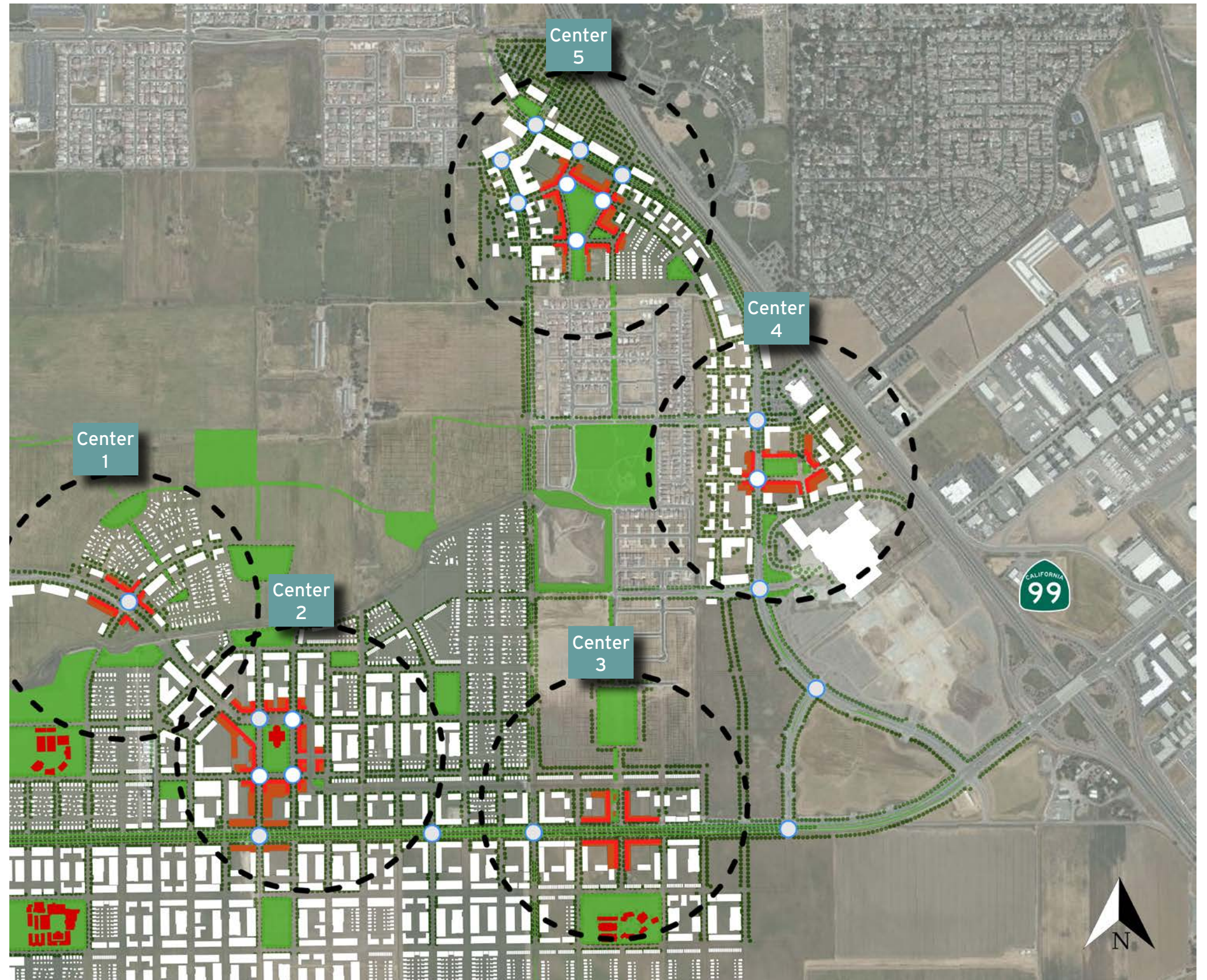
**Center 1** This center is located on Bilby Road north of the Shed C Channel. There is a stop planned here for the Light Rail-making this an important center along Bilby;

**Center 2** Planned to be the most urban of all the centers, it is the second to last stop along the Light Rail line. It will have a high concentration of retail centers and offices;

**Center 3** The gateway to Kammerer Road. Being owned by the City, this center could be one of the first built. It would be the last stop on the Light Rail line;

**Center 4** This center plays a role to include the planned casino and embrace the existing buildings around it.

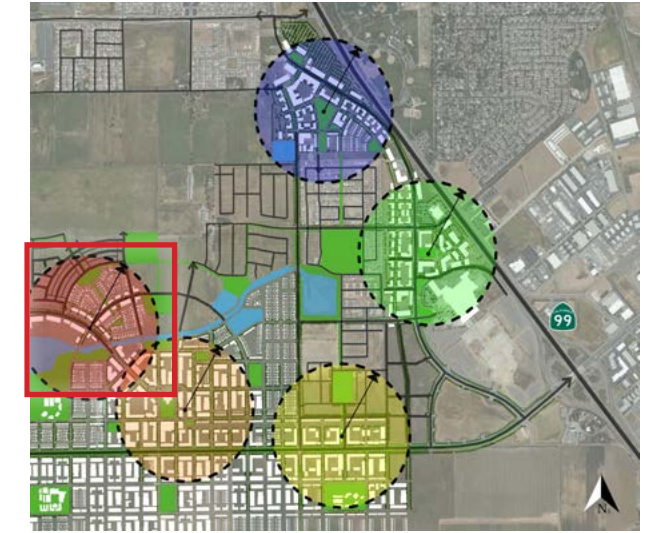
**Center 5** Has important streets connecting in it, including to State Route 99. This center will also have adjacent expansion opportunities.



# Center 1

## Existing Conditions

- Includes Right of Way for Light Rail
- Drainage ditch
- Storm water facilities built



View from Bilby looking East



View looking North

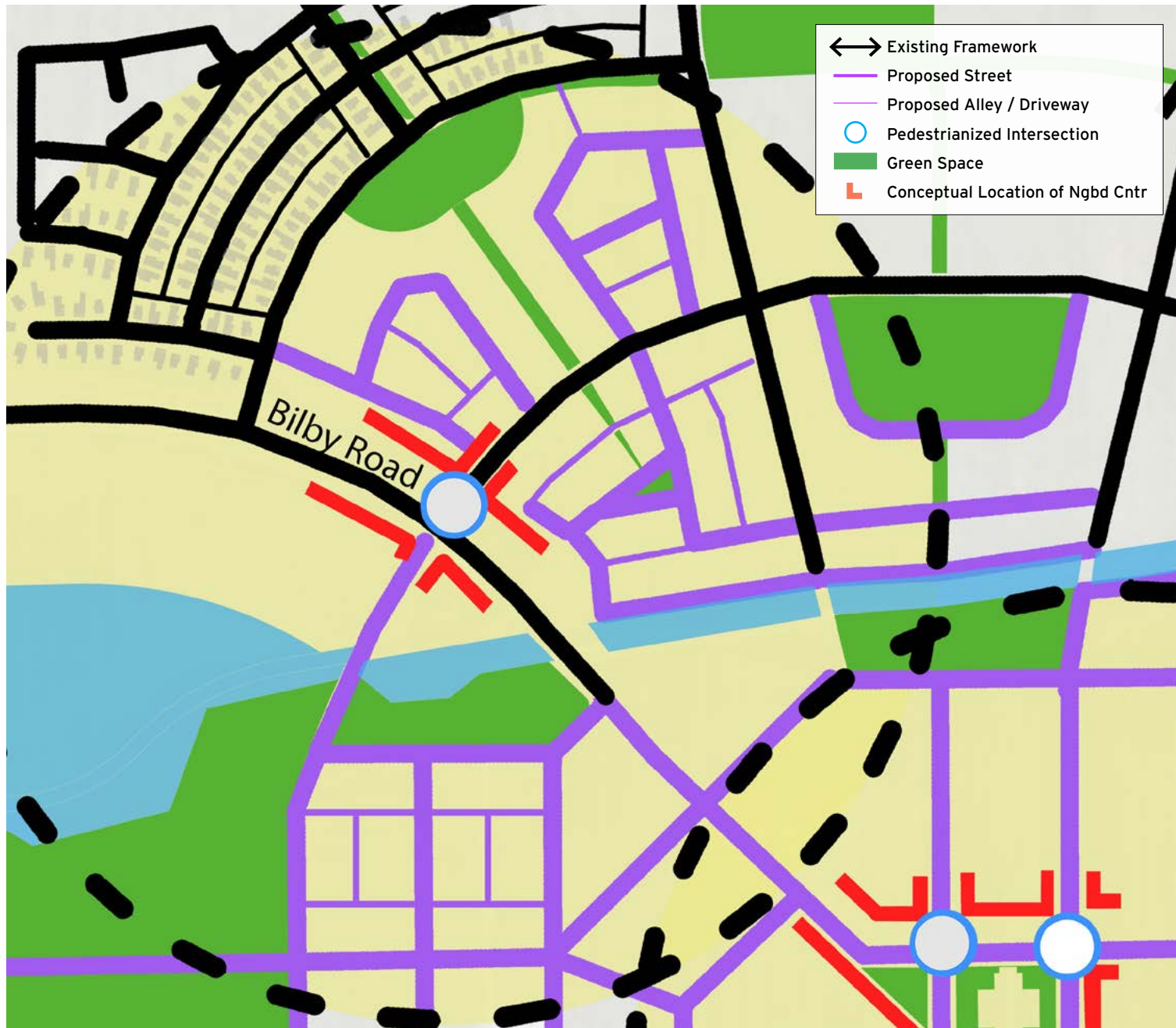


View looking South

# Center 1

## Framework for Development

- Extend Bilby Road and plan for the Light Rail right of way
- Introduce new housing in traditional neighborhood forms behind corridor fronting commercial uses to generate a suburban, mixed use center as the west gate of the Kammerer Corridor
- Take advantage of channel nearby to create park or other recreational benefits



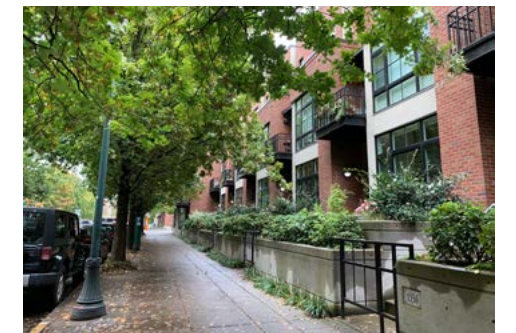
*Controlled intersection and crosswalks*



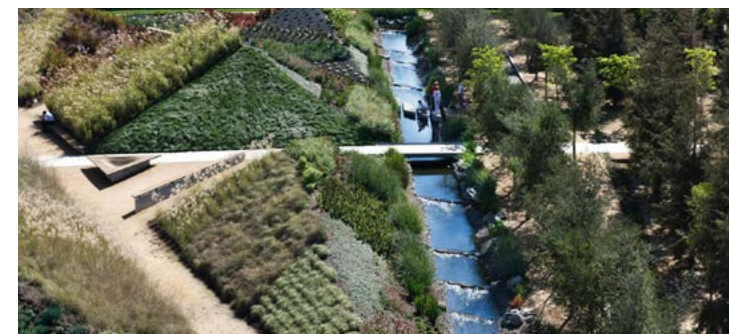
*Pedestrian-oriented sidewalks*



*Mixed-use development with ground-floor retail*



*Attached single-family housing*



*Recreational benefits could be provided around the channel for nearby residents.*



# Center 1

## Strategies for Development



### Corridor Framework

The current pattern of separate shopping centers and self-contained housing developments connected to one another only by Kammerer Road will evolve to a more interconnected pattern of neighborhood streets and walkable blocks.

New walkable mixed use centers, in which uses may be mixed horizontally and/or vertically, will become the activity centers and priority transit stop locations for four neighborhood areas, as shown in the Neighborhood Location Map.

### Mobility + Public Realm

The design of Bilby Road will be resolved and unified, with two travel lanes in each direction, wider sidewalks and large canopy trees. There will also be a forty foot right of way for the Light Rail.

New shopping centers will include improved pedestrian networks within the centers and connecting to adjoining properties. Major drive aisles will be improved to act as local streets with new buildings fronting them.

### Land Use + Parking

Corridor-fronting lots may be commercial, residential or mixed in use, connected by walkable neighborhood streets to existing and infill residential neighborhoods.

Parking for commercial uses will generally be provided in surface lots shared among businesses within each area. As more intense mixed-use centers are developed shared parking facilities will be critically important and may include parking structures as market conditions support.

Housing will typically self-park, with visitor parking curbside on streets.

### Buildings + Frontages

Commercial and mixed-use buildings along Kammerer Road and within mixed-use neighborhood centers face streets with active frontages. Buildings may be up to 3 stories, and housing in neighborhoods will limited to 3 or 4 stories.

Ground floor commercial uses will front streets and major drive aisles with shopfronts. Housing with front neighborhood streets with landscaped front yards, dooryards, stoops and porches. Parking will be located to the rear of lots in new mixed-use areas, in come cases accessed via rear lanes.

# Center 1



Existing



Proposed

# Center 1

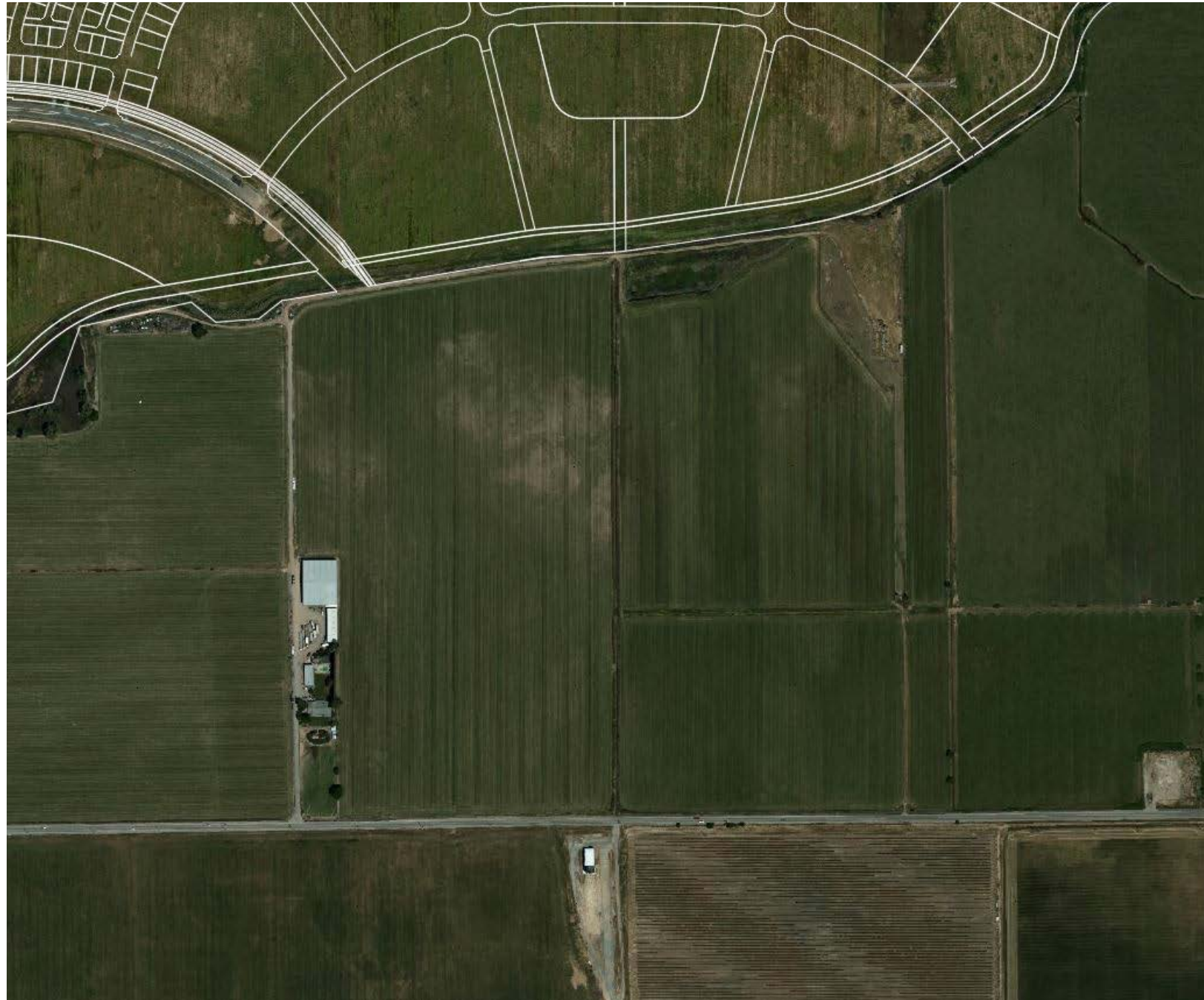
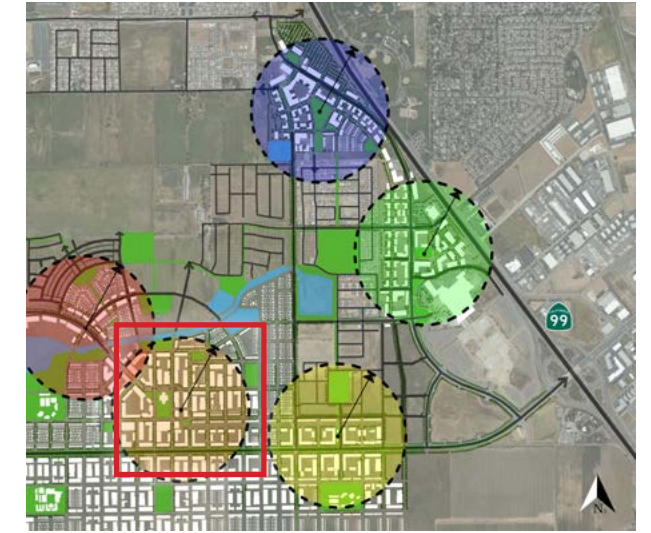


# Center 2

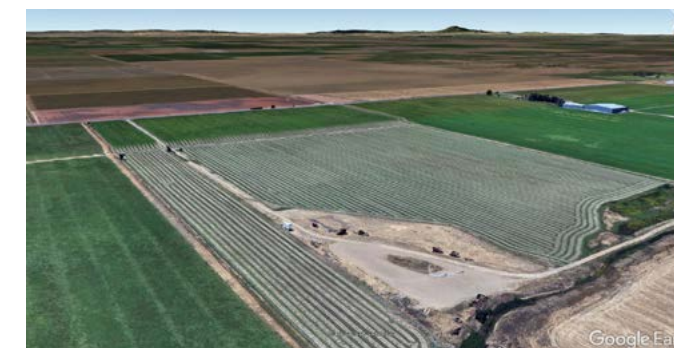
## Existing Condition

- Open agriculture land
- Kammerer Road with 2 lanes
- Drainage ditch

- Storm water facilities built



Aerial looking north of Kammerer Road



Aerial looking south towards Kammerer Road

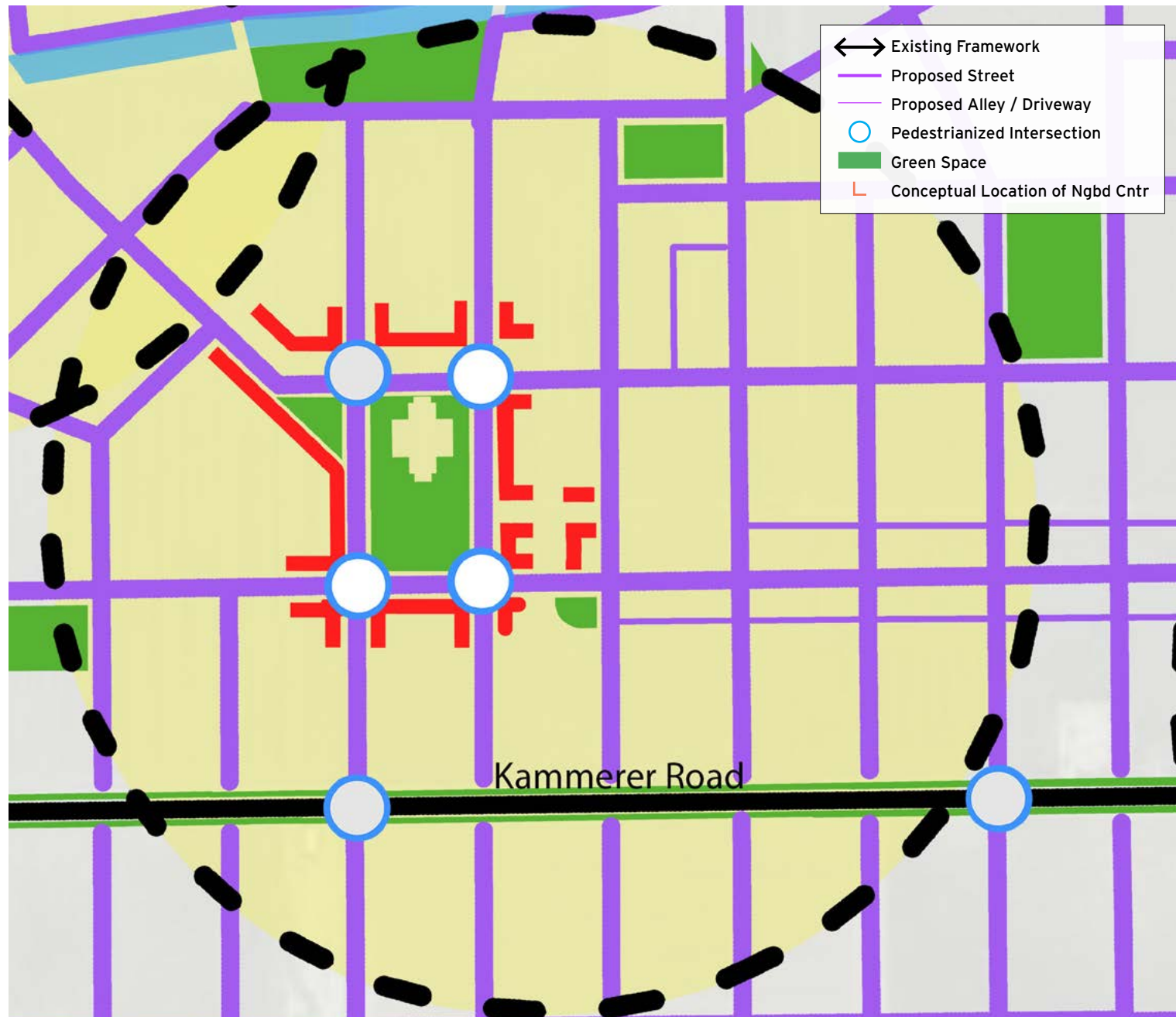


Kammerer Road looking east

# Center 2

## Framework for Development

- Adopt new zoning that enables intense mixed-use centers around transit stops and residential uses along Bilby Road and both sides of Kammerer Road
- Establish pedestrianized intersections to allow connectivity between north of Kammerer Road and the South of Kammerer Road
- Maintain a quarter mile radius between the pedestrianized intersection and the Light Rail stop
- Evolve driveway network to network of complete local streets



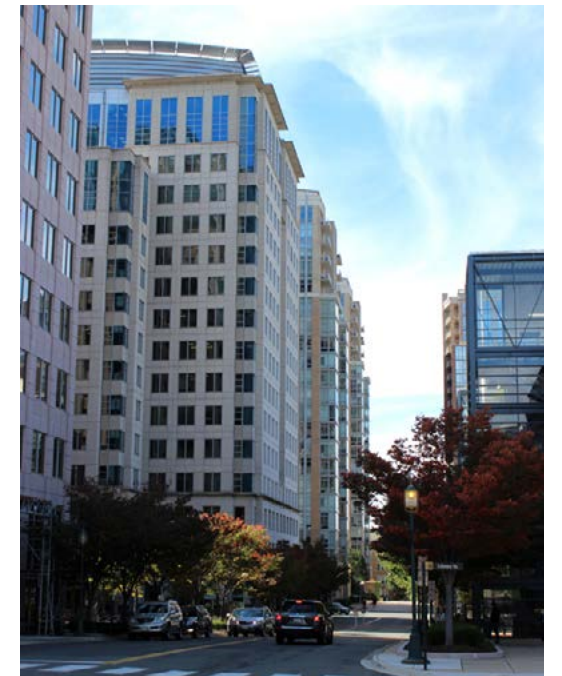
Large square shaped by buildings and the center



Neighborhood-serving retail



Tree-lined neighborhood street



Development with higher intensity



# Center 2

## Strategies for Development



### Corridor Framework

Develop Kammerer Road to evolve to be a more interconnected pattern of neighborhood streets and walkable blocks.

New walkable mixed use centers, in which uses may be mixed horizontally and/or vertically, will become the activity centers and priority transit stop locations for three neighborhood areas, as shown in the Neighborhood Location Map.

### Mobility + Public Realm

A design for Kammerer Road with two travel lanes in each direction, center turn lane and median with trees in selected locations, wider sidewalks and large canopy trees, buffered bike lanes and curbside parking or side access lanes should be explored.

Development for street fronting shopping centers will include pedestrian networks within the centers and connect to adjoining properties. Major drive aisles will be improved to act as local streets with new buildings fronting them.

### Land Use + Parking

Over time, new mixed-use will center around transit stops that will provide concentrations of commercial uses, with the potential for housing to fill in between those centers. There will be a higher density around transit stops transitioning to lower density/single family housing towards the edges of this Center- particularly towards the east and north east side.

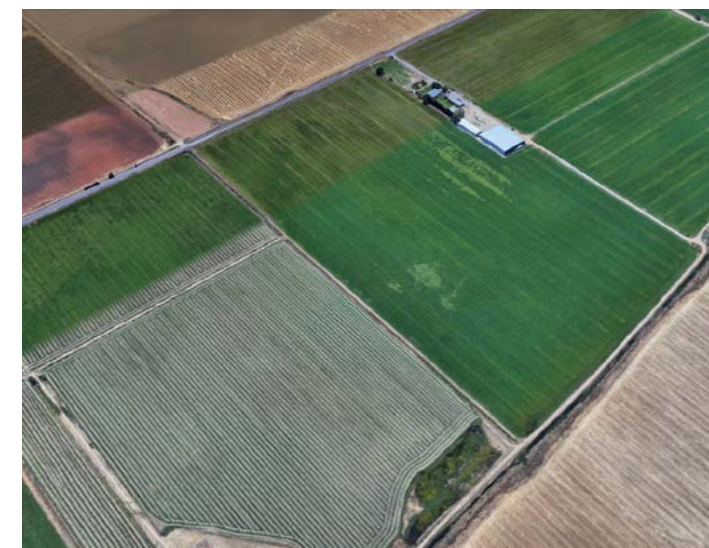
Parking for commercial uses will generally be in shared lots and structures, and residential parking may be in dedicated or shared facilities, well screened from street views. Managed parking for customer and visitor use will be located curbside on local streets. As more intense mixed-use centers are developed shared parking facilities will be critically important and may include parking structures as market conditions support.

### Buildings + Frontages

Commercial and mixed-use buildings along Kammerer Road and within mixed-use neighborhood centers face streets with active frontages. Buildings may be up to 6 stories, and housing up to 4-6, with scale-down transitions to existing neighborhoods.

Ground floor commercial uses will front streets shopfronts, and housing with front neighborhood streets with landscaped front yards, dooryards, stoops and porches.

# Center 2



Existing



Proposed

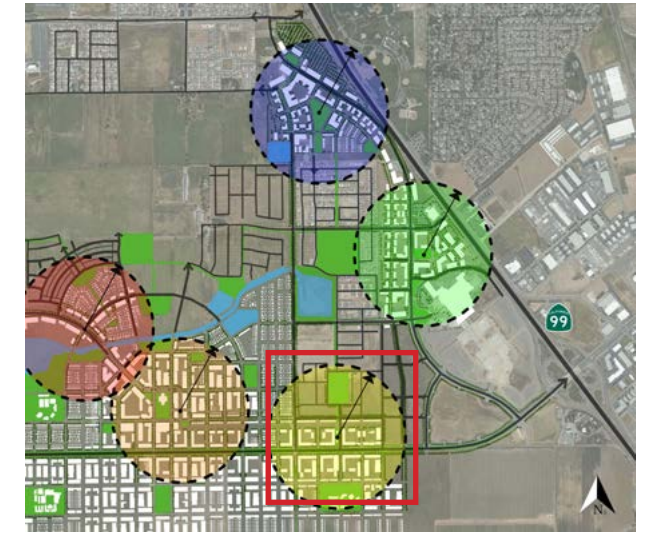
# Center 2



# Center 3

## Existing Condition

- Housing that adjoins Land owned by the City
- Arterial roads under construction
- Existing Kammerer Road in rural condition



Aerial looking north



Kammerer Road looking East near Promenade Pkwy



Existing Kammerer Road looking West



West Kammerer Road looking East

# Center 3

## Framework for Development

- Develop safe and convenient movement with pedestrian-oriented design and wide sidewalks with shade
- Design for restaurants, cafes and bars fronting the street to activate both sides of Kammerer Road
- Increase development intensity with mixed-use buildings providing living and working spaces and amenities that activate the center
- Light Rail will improve community access



# Center 3

## Strategies for Development



### Corridor Framework

Perhaps to some extent counterintuitively, the mixed-use center in this segment is likely to be located on the park axis and the end of the light rail line, and not on the future intersection of Lotz Parkway and Kammerer Road. As may prove typical along the corridor, the intersections of major arterial streets are very difficult to convert to pedestrian-oriented places due to the high volumes and relatively high speeds of traffic at those locations.



### Mobility + Public Realm

A good pattern for spacing local streets is approximately 1,200 feet apart, with existing project entry drives centered between them.

This is a very good pattern and spacing for a street network serving a mixed-use center and the existing streets and project drives can simply be extended and connected to a more complete local network of walkable streets. A local street connecting through from Center 2 to Center 3 should be provided.

Local streets should be lined with large shade trees for pedestrian comfort and heat reduction, with planting strips/area to improve stormwater quality.



### Land Use + Parking

Given the opportunity for concentrations of retail use in Center 2, it is anticipated that housing will be the predominant use within area as well as minor retail and offices. Single-family attached housing and neighborhood-scale multi-family will be mixed, and commercial uses will be organized as a one or more small-scale neighborhood centers.

Housing will typically self-park, and parking for neighborhood centers will be shared parking lots beside or behind shops and restaurants and well screened from street views.

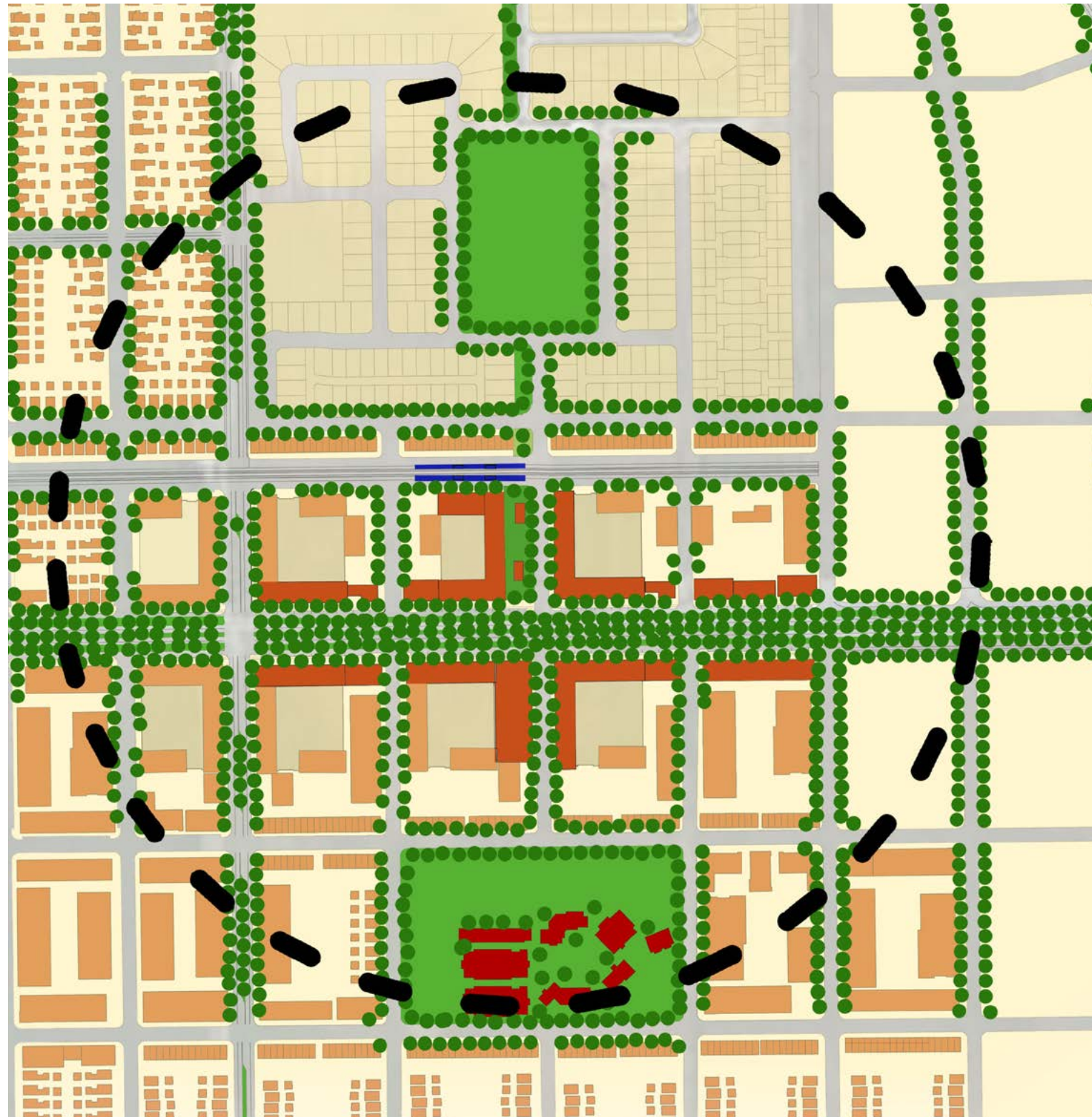


### Buildings + Frontages

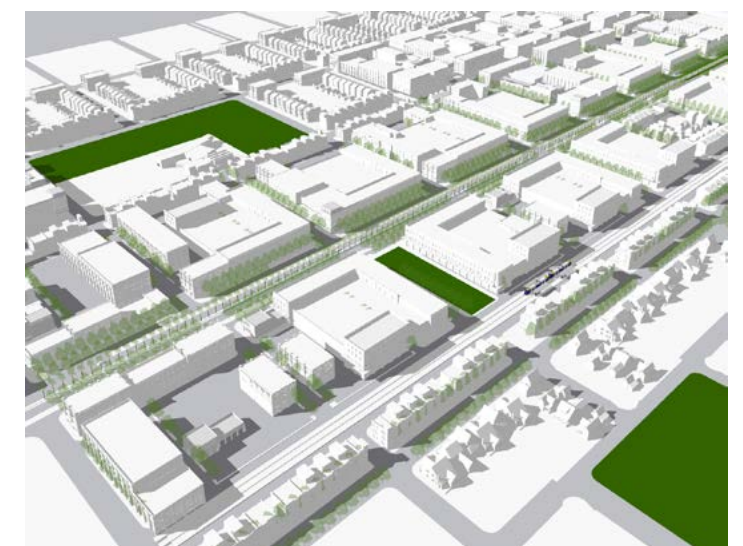
Buildings should face streets with active frontages and ground floor residences along street frontages should take direct access from the street, via front yards, dooryards, stoops or porches. Visitor access from other units should generally be via a lobby, stair and corridor or a shared courtyard or paseo. Visitor access via alleys and parking lots is strongly discouraged.

Commercial buildings should face streets with active, welcoming shopfronts and service access should be provided from rear lanes and parking areas.

# Center 3



Existing



Proposed

# Center 3

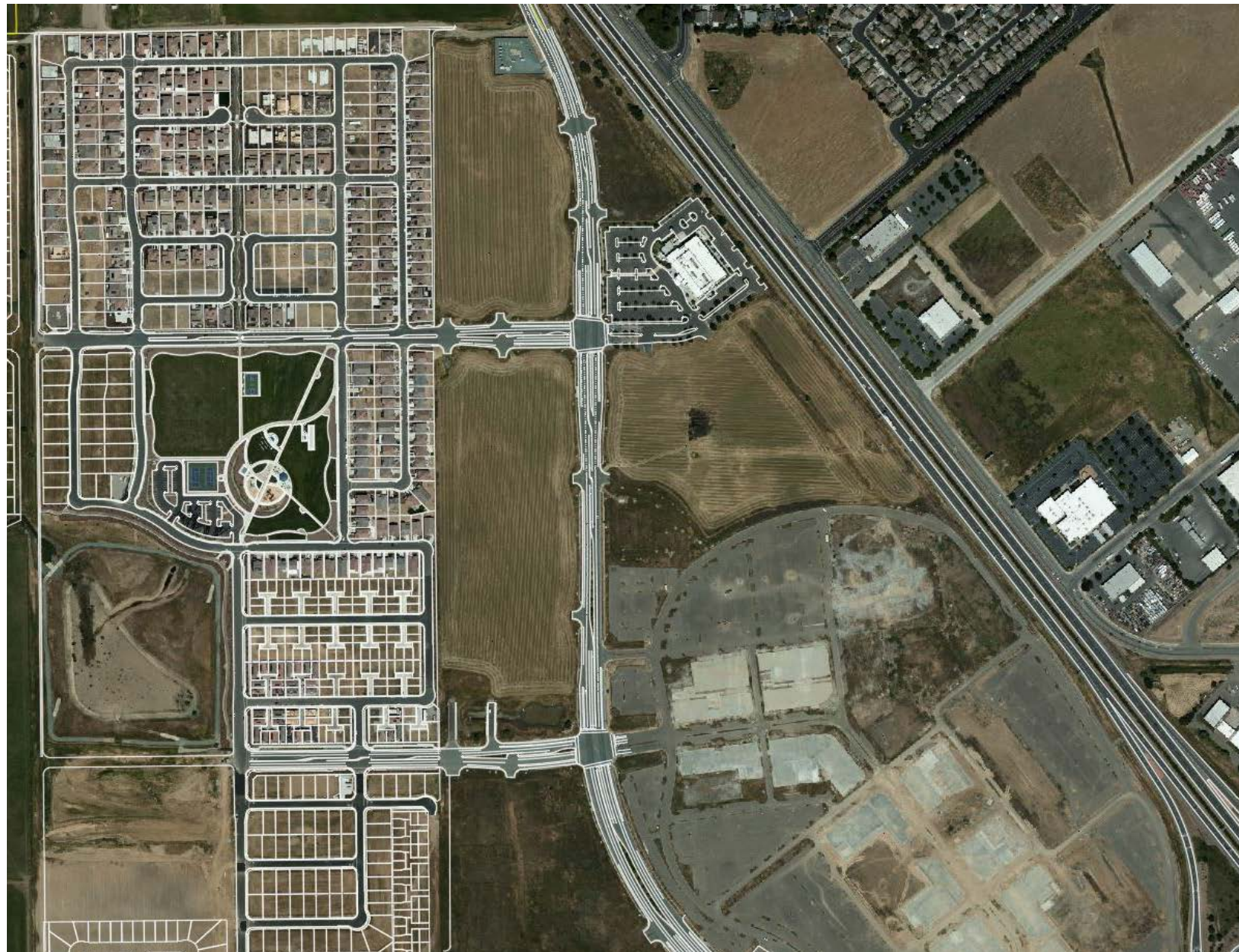
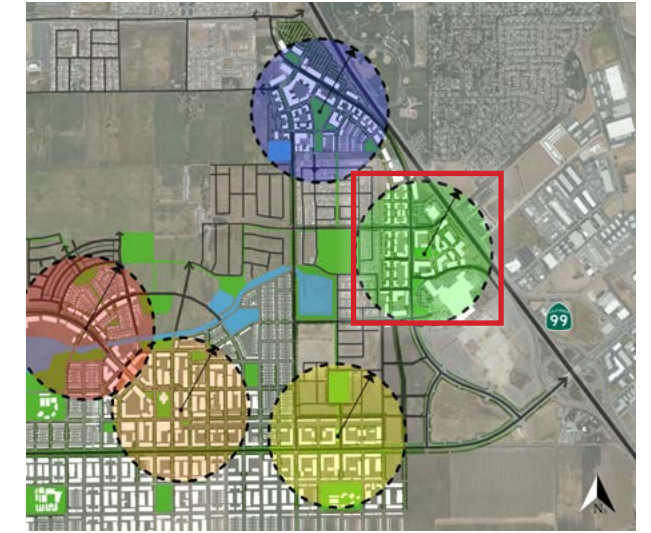




# Center 4

## Existing Condition

- Long distance between existing intersections- other planned streets are not built out
- Housing development west of Promenade Parkway as well as Kaiser Permanente Building east of Promenade.
- Planned Casino on the north side of what was the mall site
- Fully developed Promenade Boulevard equipped with bus stops and medians



Existing Streetscape - three vehicular lanes in each direction separated by a landscaped center median



Commercial buildings with driveway entry on Foothill Blvd



Powerline easement along Day Creek Channel

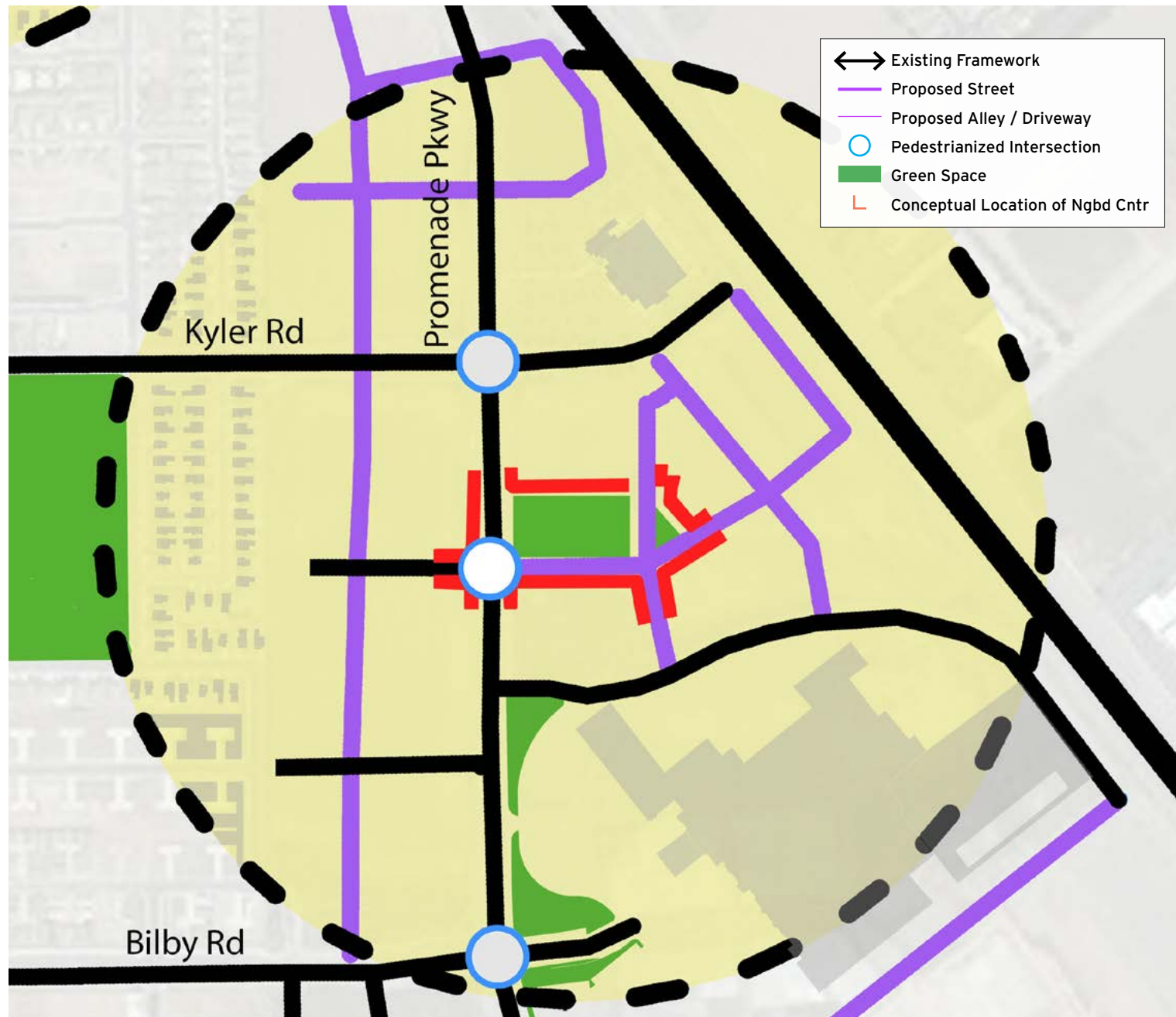


Currently vacant land at Milliken Ave & Foothill Blvd

# Center 4

## Framework for Development

- Develop Bilby Road to Kyler Road, along with existing proposed roads with controlled intersections and crosswalks
- Convert existing driveways into internal streets, allowing for creation of mixed-use centers on a block structure to start to generate mixed-use center block structure
- Align new streets to create new residential lots backing up to existing housing
- Opportunistically connect new north-south neighborhood streets to drives parallel to Promenade Parkway



*A Restaurant with street-fronting dining court*



*Widened sidewalk*



*Multi-family homes with direct access from the street*



*Semi-rural landscape elements*



*Tall trees visually narrow the street and provide enclosure and shade*



# Center 4



Existing



Proposed

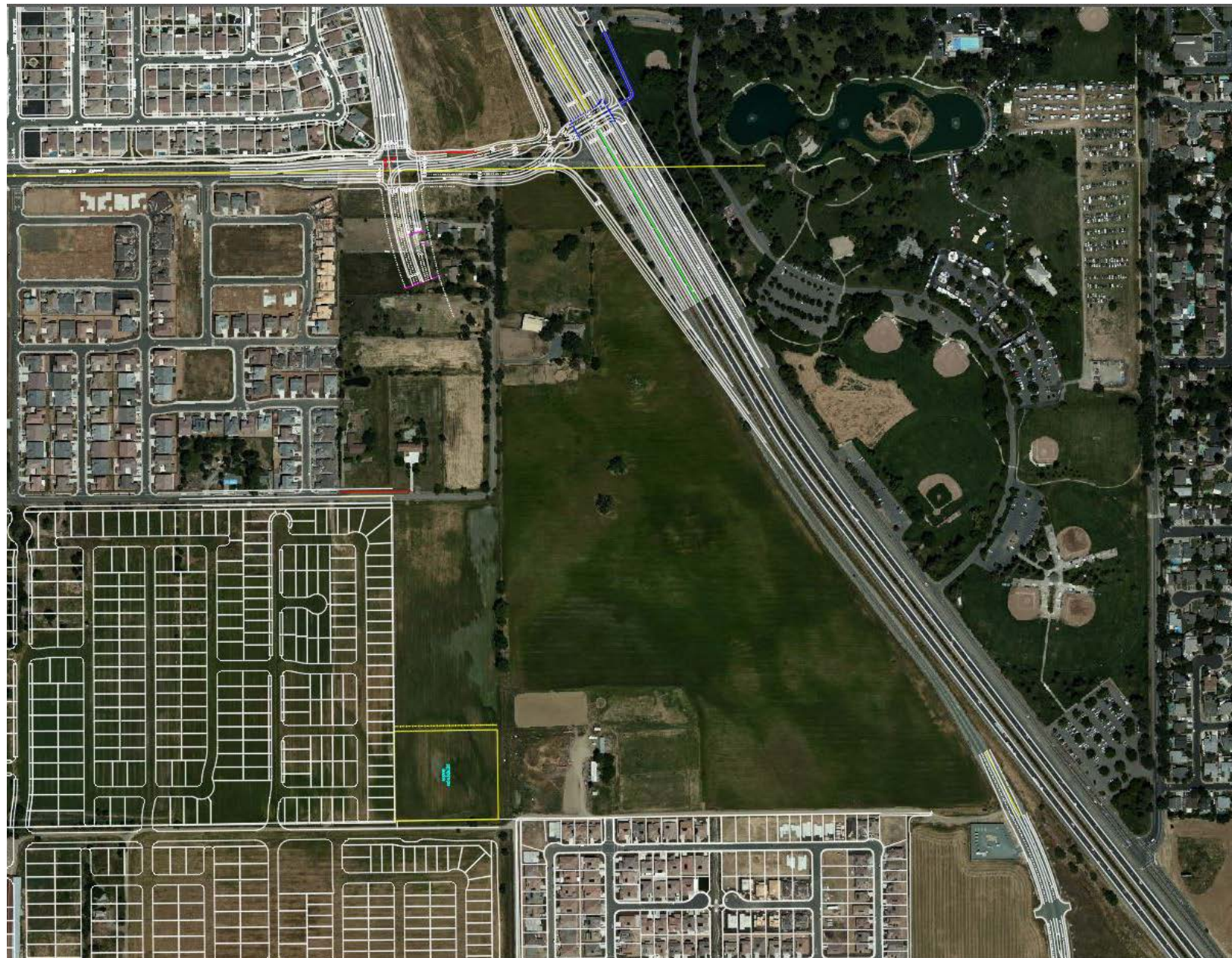
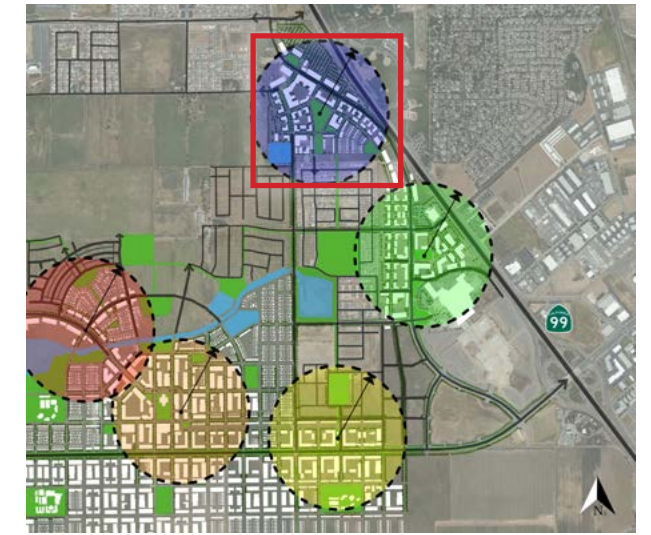
# Center 4



# Center 5

## Existing Condition

- Plans in place to connect Whitelock Parkway to State Route 99 and bring Lotz Parkway south of Whitelock Parkway towards Kammerer Road; realign Promenade Parkway into Lotz Parkway
- Open agricultural land
- Housing that is built and that is planned and or currently getting developed



Existing landscape looking north



Edge of Promenade Parkway looking north



Aerial looking north



Aerial looking south

# Center 5

## Framework for Development

- Develop safe and convenient pedestrian movement with pedestrian-oriented design and wide sidewalks with shade
- Design restaurants, cafes and bars that front the street; bringing activity to streets between Lotz Parkway and Promenade Parkway
- Increase development intensity with mixed-use buildings providing living and working spaces and amenities that activate the center
- Connect to existing and planned green spaces within existing and future neighborhoods.



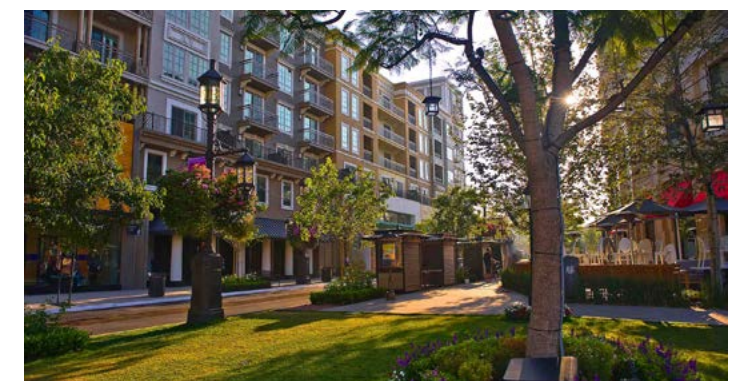
Accessible open spaces



Neighborhood open spaces



Mixed-use corner with commercial



Small neighborhood square



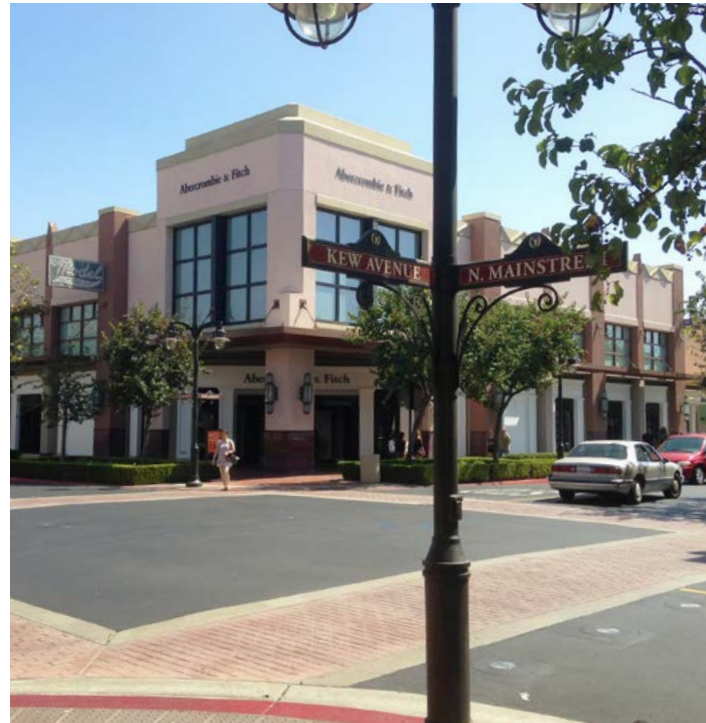
Housing on major corridor



Commercial with tree lined streets

# Center 5

## Strategies for Development



### Corridor Framework

Utilize and compete/extend existing block structure to accommodate a mix of retail, office and housing uses.



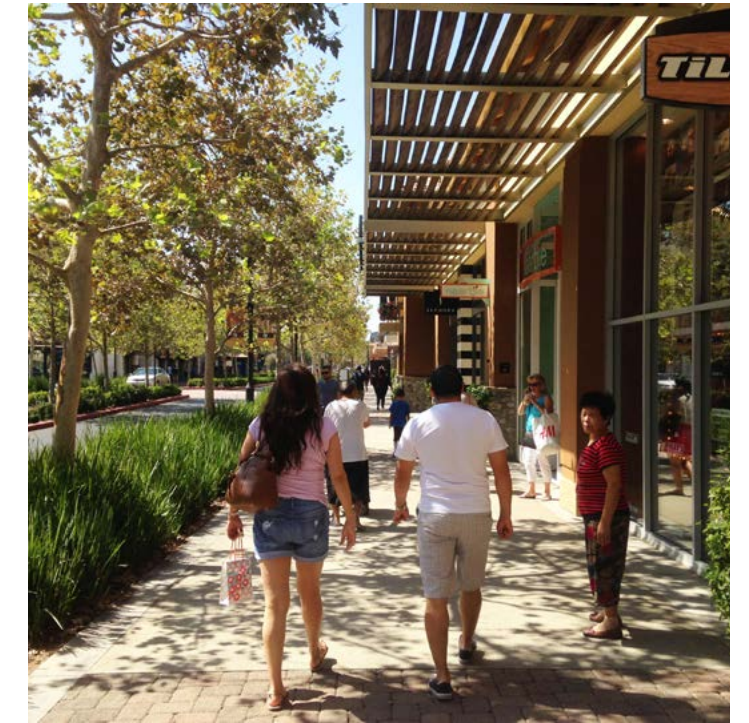
### Mobility + Public Realm

Implement complete streets improvements to evolve existing street network into high quality tree-lined neighborhood streets ideal for pedestrians and cyclists. New neighborhood parks and greens should be provided in residential areas, along with good pedestrian and bicycle access to new trails and park facilities within the existing utility corridor along the west side of the area.



### Land Use + Parking

Housing is recommended in most of the proposed parking surrounding the proposed shopping center, and office uses are also recommended. However, housing and office may be intermixed in a variety of patterns with retail expansion of Center 5, including the introduction of housing one block west of Promenade Parkway.



### Buildings + Frontages

Buildings should face streets with active frontages. Retail ground floors should face streets with active, welcoming shopfronts and service access should be provided from rear lanes and parking areas. Office buildings should front streets with grand lobbies and active ground floor uses wherever possible.

Ground floor residences along street frontages should take direct access from the street, via front yards, dooryards, stoops or porches. Visitor access from other units should generally be via a lobby, stair and corridor, courtyard or paseo.

# Center 5



Existing



Proposed



# Center 5



# Center 5

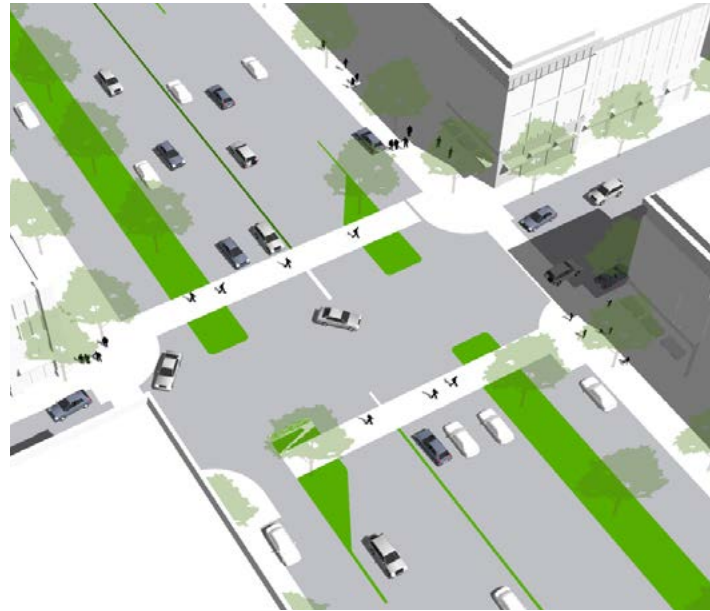


# 5

## Implementation

# Steps to Implementation

## Kammerer Road Kit of Parts



### Reconstruction of Kammerer Road

The reconstruction of Kammerer Road into a multi-way boulevard is a primary component of the overall vision described in this strategy document. This can be accomplished by a combination of frontage improvements and associated greenfield development projects, coordinated with intentional adjustments to the landscape and operations of Kammerer Road itself. A series of strategies for such adjustments is presented on the following pages.

It is anticipated that any significant changes to the appearance and function of this future primary artery in Elk Grove will require extensive analysis and public input. It is recommended that this be done as part of an upcoming General Plan Update process, of which the illustrations herein may be seen as a preview.



### Creation of Supporting Street Grid

The use of frontage streets along Kammerer Road allows a grid of streets to connect without disrupting through traffic. In fact, use of a street grid is an essential component of making the proposed design of Kammerer Road function as intended. While the size of the grain of the street grid has yet to be determined, development standards and subdivision regulations should ensure that surrounding development results in an intersection density of no less than 150 per square mile and minimizes the use of cul-de-sacs and non-through streets (or loop roads). Large lot development such as shopping centers should be designed to allow transformation to that standard over time.



### Build Out Form-Based Code

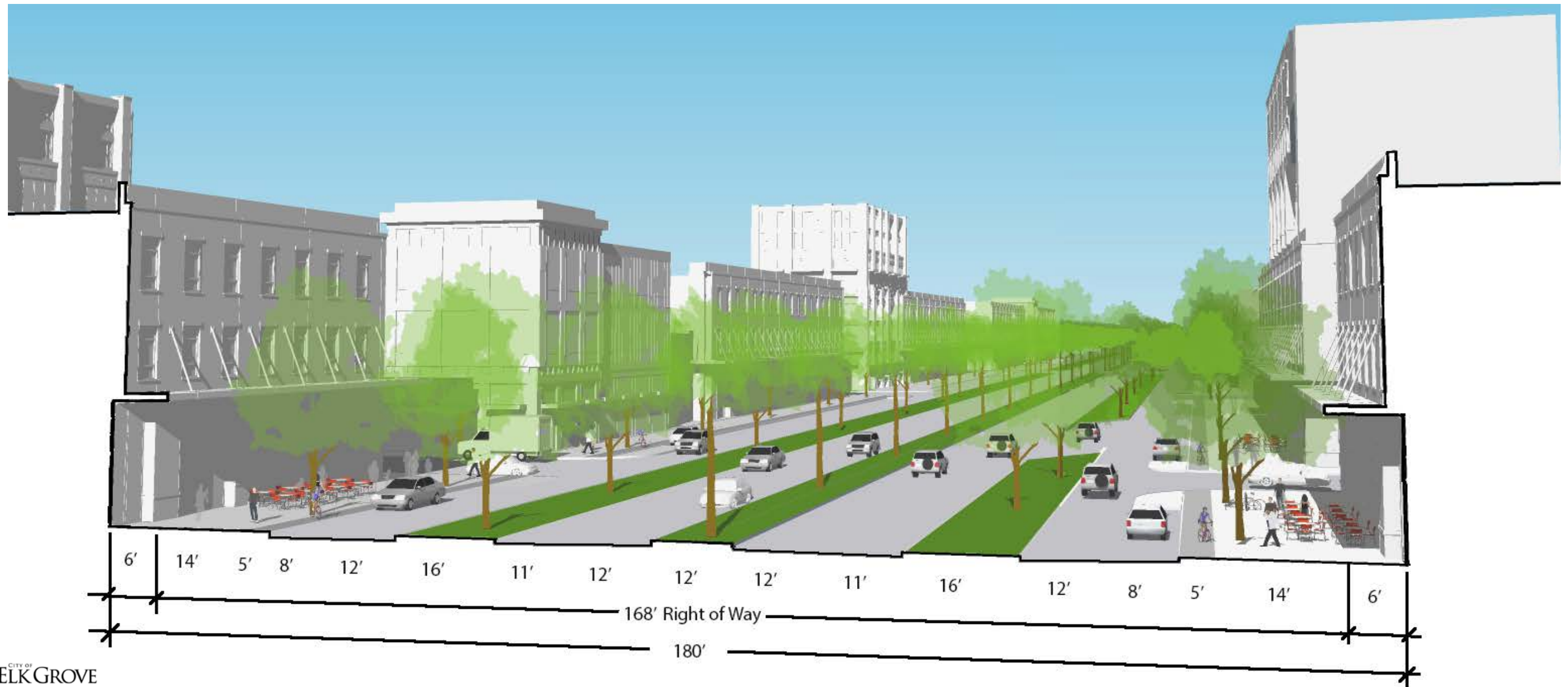
Based on the vision for change described in the previous sections, the updated zoning regulations for development within the Study Area should include objective standards and guidelines or a Form-Based Code to ensure that such development results in a walkable set of neighborhoods in a range of scales.

The standards and guidelines should be calibrated to each of the “centers” as shown in the corridor plan illustration on page 35, calibrating public space types and building types to each area based on the envisioned scale and type of future infill development. This set of Standards should be developed as a “Form-Based Code” which is geared toward the creation of predictable outcomes. Four of the major components of the code should include:

- Street or Thoroughfare Standards, to ensure complete streets
- Public Space Types,
- Building Types, and
- Private Frontage Types.

# Reconstruction of Kammerer Road

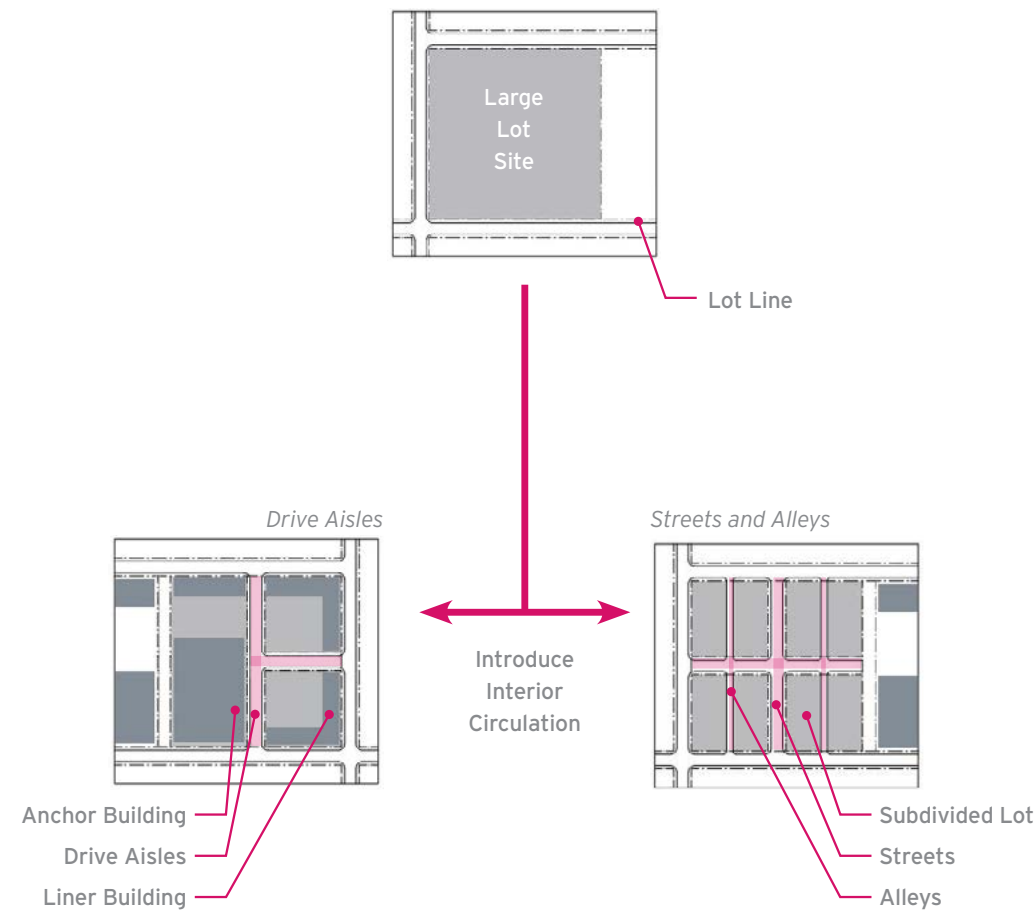
This segment of Kammerer Road is approximately 1.3 miles in length. It consists of two vehicular lanes and a 12' median. A slip lane frontage assembly provides an attractive street for residences as well as commercial. The low traffic speed/volume environment is safe for a bike lane which is buffered by a parking lane and tree lined sidewalks that create a safe ambience for pedestrians and cyclists alike. This type of frontage road provides high value. It also has a 16' lane to turn into the frontage road- which gives access to local streets- reducing traffic on Kammerer Road.



# Creation of Supporting Street Grid

**STREET GRID AND LARGE LOTS** Individual parcels should be developed within a grid of streets. The street network should be designed to define Blocks whose perimeters, measured as the sum of all sides should generally not exceed: 3000' in T3 Zones; 2500' in T4 Zones; and 2000' in T5 Zones. The street grid should have at least 150 vehicular street intersections / square mile in the T-zones. Within each block, service roads, such as alleys, lanes, and driveways, as well as pedestrian and bicycle only passages may be provided. The combined number of vehicular street and non-vehicular (pedestrian passages) intersections should exceed 300 / square mile.

Future development should be designed such that new streets terminate at other streets forming a network or street-grid. Streets in new developments should connect to existing streets in existing development where at all possible. Cul-de-sacs should be minimized and used to accommodate specific site conditions only. Internal Thoroughfares including private streets and drive aisles in shopping centers should also form part of the street grid. Drive aisles in parking lots should be designed to meet the standards of city streets (with appropriate sidewalks and streetscape) so that parking fields can be converted to blocks with the drive aisles as streets.



It is anticipated that some development will occur on large Blocks or Lots with one or more Large Format Type buildings as part of the ensemble or with a large assembly of homes. Street or Thoroughfare Standards will ensure that the resulting Primary Streets are pedestrian-friendly and lined with building fronts while still accommodating surface parking lots required by large format uses.

Although development of a specific lot may require a phasing strategy and land ownership/tenant considerations that impact the ultimate build out of a project, each interstitial phase shall ensure the highest level of pedestrian improvements practicable. Interior parking lots shall consider servicing and utility requirements so that future development is feasible and pedestrian-friendly.

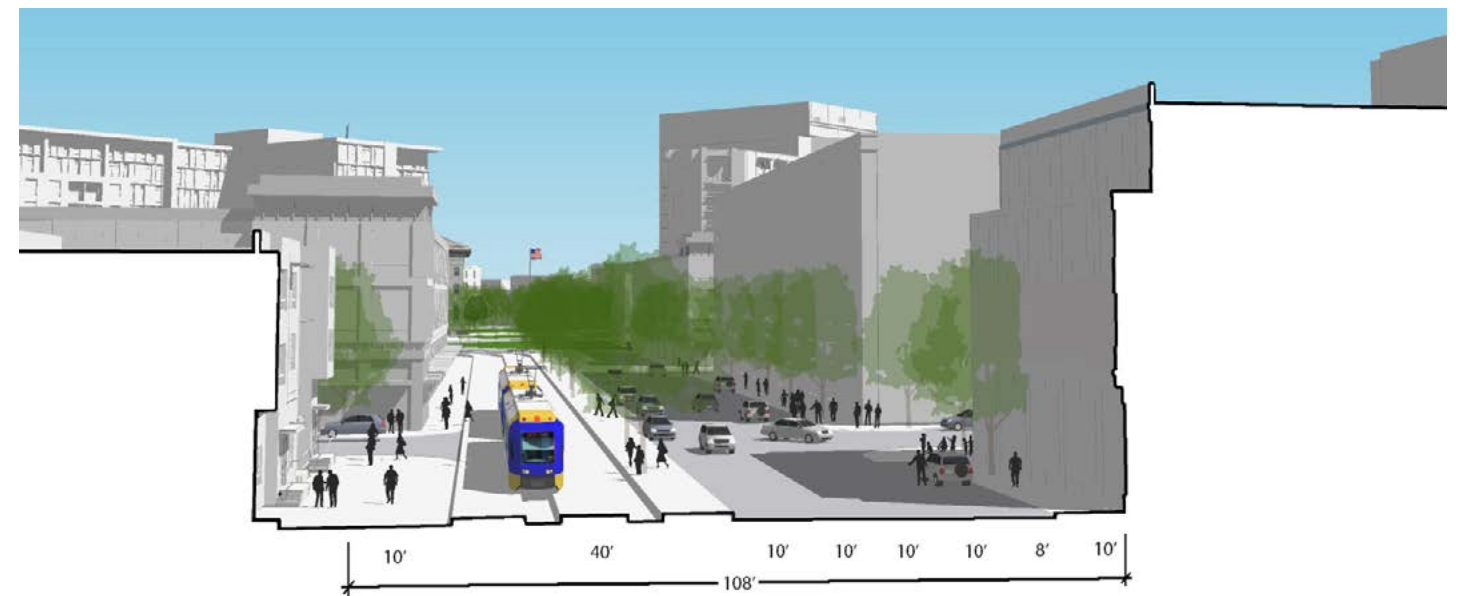
**PUBLIC SPACE** Each Neighborhood should assign at least 5% of its Urbanized area to Civic Space. With there being at least one Main Civic Space within 800 feet of the geographic center of each neighborhood. Within 800 feet of every Lot in Residential use, a Civic Space designed and equipped as a playground should be provided. School sites should be provided, sized to support walking to school.



**STREETS OR THOROUGHFARE STANDARDS FOR COMPLETE STREETS** All new thoroughfares should be designed under a “Complete Streets” policy. Streets should generally consist of vehicular lanes, and Public Frontages. Bicycle lanes will also be appropriate on some streets. Public Frontages contributes to the character of the Transect Zone, and includes the types of sidewalk, curb, planter, bicycle facility, and street trees. Streets should be designed in context with the urban form and desired design speed of the Transect Zones through which they pass. Streets may include vehicular lanes in a variety of widths for parked and for moving vehicles, including bicycles. Vehicular lane width should generally not exceed 10’ in T-3 and T-4 zones, and 11’ in T-5 zones, except for the through lanes of Kammerer Road. A bicycle network consisting of Bicycle Trails, Bicycle Routes and Bicycle Lanes should also be provided. Within the Transect Zones (T3 through T5) suggested for the study area, pedestrian comfort shall be a primary consideration of Street Design. Design conflict between vehicular and pedestrian movement generally shall be decided in favor of the pedestrian. Bilby Road should be reconstructed to the aforementioned standards to leverage the development potential of the projected light rail.



**BILBY ROAD** This segment of Bilby is approximately .6 mile in length. It consists of two lanes in each direction. It also includes a forty foot right of way for a light rail. Each side includes a ten foot sidewalk.



**PARKING** For Elk Grove, understanding the physical requirements and constraints of parking through the entire Rural-to-Urban Transect could have profound effects on resulting regulations. For example, the sheer land area required to meet parking requirements “on-site” are often too great to right-size the blocks and create a walkable urban environment. Overly large block dimensions resulting from “donut” solutions may affect street connectivity and walkability. In other words, in the case of parking, more is not necessarily better—in fact, it is often just the opposite. One option to counter this, is the use of tartan street grids that intersperse larger (deck-bearing) blocks with smaller ones. Alternatively, if the financial resources are available, a large deck surrounded with liner buildings containing active uses can be built at the outset of a project. Located at the center of a project, it can be used to handle overflow parking from neighboring blocks. Robotic parking systems are another option which consist of large computer-controlled, horizontal and vertical elevators. that eliminate the space required for drive aisles and ramps as is the need for lighting, heating and cooling of a parking structure, reducing not only the space required for parking, but the operating and liability costs.

Transportation Demand Management solutions (TDMs) are another, policy that can greatly impact parking ratios. The menu of TDMs can include incentives for car-pooling, parking cash-out strategies (which can amount to paying employees not to drive), subsidized transit passes for employees, incorporating changing rooms with showers for employees who bike or who walk long distances to work.

Another emerging factor is the increased reliance

on TNCs like Lyft and Uber. Anecdotal evidence points to reduced demand for urban parking as a result of these services. With the eventual adoption of on-demand autonomous vehicles, this trend is likely to accelerate. From a policy perspective, the following best practices have proven to have merit:

**1** Minimize (or eliminate) off-street parking requirements. No developer will build less than think they need (their lenders won’t allow it), but by the same token, no developer should be forced to build more than they need. Parking maximums should be explored in future discussions as trends and paradigms evolve.

**2** Where off-street parking requirements exist, create a fee in lieu system allowing developers to pay into a parking fund that will provide for the construction centralized parking for common use.

**3** Un-bundle off-street parking from the land uses it was built to serve, so that any excess parking can be leased on the open market. Bellevue, Washington, now requires parking costs to be listed as a separate line item in office leases, resulting in 30 percent fewer individuals driving alone to their offices.

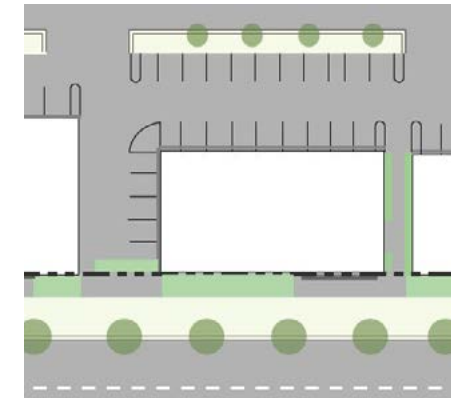
**4** The use of fair-market pricing can also be used to effectively manage on-street parking. A good rule of thumb for the optimal pricing of on-street parking is to set the price (utilizing innovative, computer-controlled meters) so that one out of every nine spaces is always available. Those who are in a rush or who desire the convenience of parking near their destination tend to be willing to pay more, depending on the demand at that time of day.

**5** Require a menu of TDMs for all new development in the Urban Style Employment Centers.

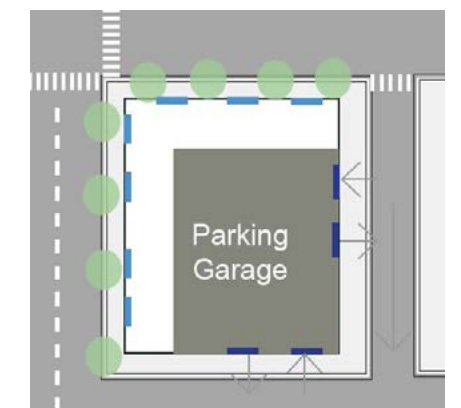
Critical to the calculation of density in any urban environment is the amount of parking to be accommodated (usually calculated as a function of # of spaces/sq. foot of building) and the arrangement of the parking (on a surface parking lot or in a garage). For example, in suburban commercial environments where parking is accommodated in surface lots, it is not uncommon for 60 - 65% of the land area of a project to be devoted to parking cars. Therefore, any discussion of density is inextricably related to parking.

**LOWER INTENSITY (T3 & T4)** In lower intensity employment centers, for example those in T3 areas and lower density T4 areas, surface parking lots are the norm as densities do not justify the increased cost of building parking garages. However, surface lots often destroy the sense of enclosure within the public realm, disallowing “civic rooms” by their lack of spatial definition. For economic reasons, surface lots are also rarely implemented with a level of detail that befits a public plaza. Therefore, in walkable urban environments surface lots it is advisable to separate lots from primary street frontages by buildings and for these parking lots to be screened from secondary street frontages with screening devices such as fences, walls or hedges when buildings are not feasible along those edges.

**HIGHER INTENSITY (T4 & T5)** In higher intensity areas, such as higher density T4 zones and T5 zones, parking is normally placed in above ground garages. Such garages should be screened and out of view from primary streets and be lined with active uses to enhance the pedestrian experience.



Conditions with a Build-to Line. Each building has most of its building face located directly along the Build-to Line. Note that the building in the middle has a lower percentage of frontage occupancy than the buildings on either side (less of its building face along the Build-to line).

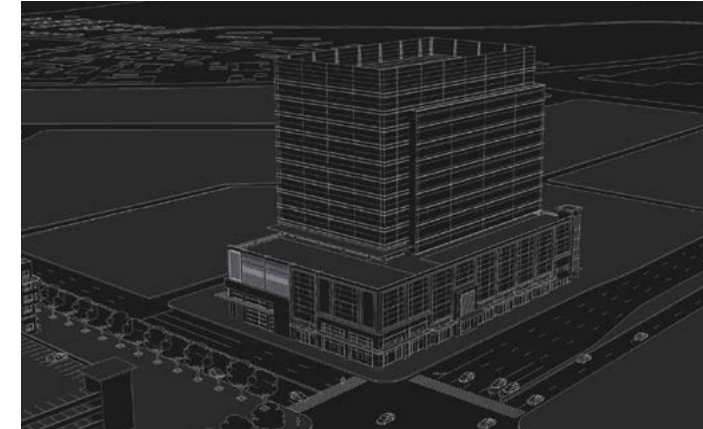
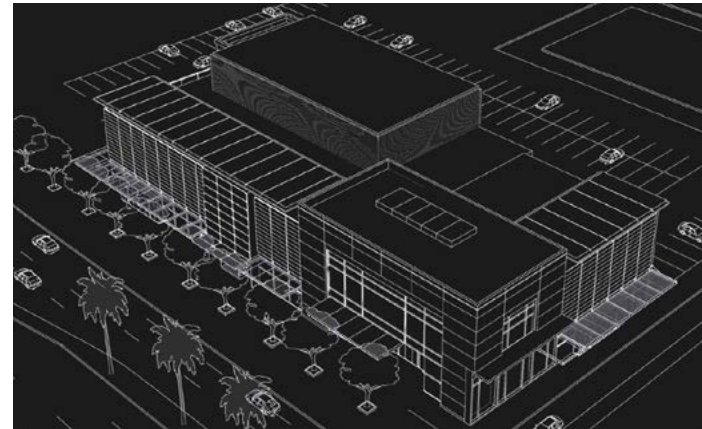
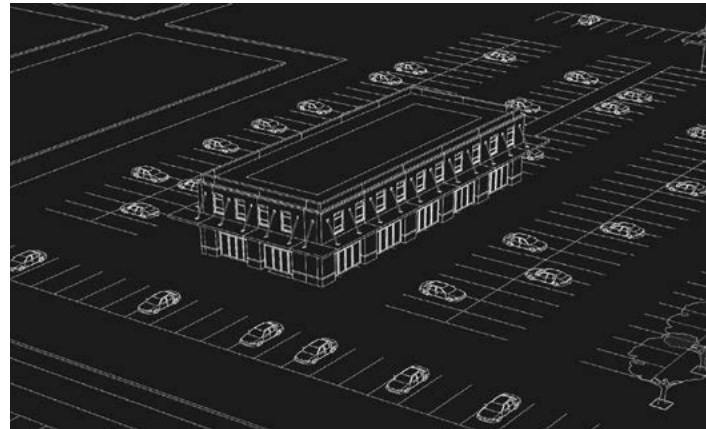


Parking garage is lined with retail shops along primary and secondary street to buffer garage. Access for drivers is located off alley and side street.



# Build Out Form-Based Code

## BUILDING TYPE MIX



### TYPE T3

- Low Density, Low Rise (1-3 stories)
- Individual building
- Commercial may include retail
- Surface Parking lot (front or rear)
- May include store front

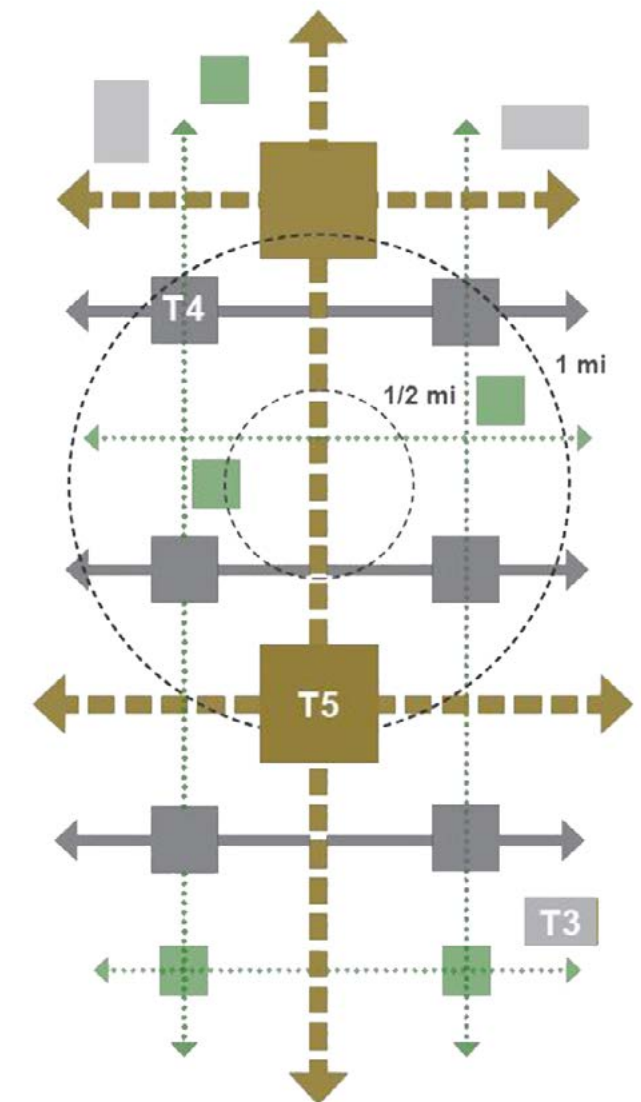
### TYPE T4

- Medium Density, Low Rise (2-4 stories)
- Commercial and Retail
- May include residential
- Surface Parking lot (rear)
- Public Realm facing
- May include store front

### TYPE T5

- Medium Density, Mid Rise (3-6 stories)
- Mixed Use
- May include Residential and Recreational
- Structured Parking
- Public Realm facing
- Store front
- Smaller Building footprint

The diagram below is an abstract representation of the arrangement of the building typologies in relation to each other and the use of anchor points and axis to create the primary, secondary and tertiary links, connections and the roads system.

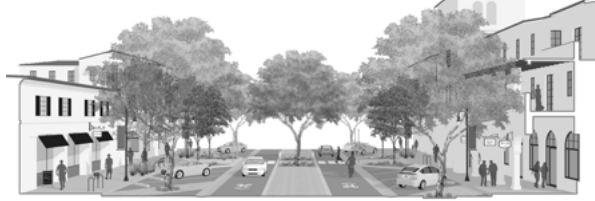















# BUILDING TYPE MATRIX

Type	Transect	Building Height	Ground Floor	Net Density	Parking Location
Rear Loaded Single Family 	T3	1-2.5 Story	Residential	4-15 DU/Acre	Attached or Detached Garage/ On Street Parking
Townhouse 	T3, T4, T5	3-3.5 Story	Residential	12- 20 DU/Acre	Attached or Detached Garage/ On Street Parking
Livework 	T4, T5	3.5 Story	Retail/Office	10-16 DU/Acre	Surface Parking
Low Rise Multi Family 	T4, T5	2-3 Story	Residential	30-35 DU/Acre	Surface Parking
Wrap Multi Family 	T4, T5	4-5 Story	Residential	50-80 DU/Acre	Attached Parking Structure
Podium Multi Family 	T4, T5	5-7 Story	Retail	60-110 DU/Acre	Integral Parking Structure

Type	Transect	Building Height	Ground Floor	Net Density	Parking Location
High Rise Residential with Retail 	T5	8+ Story	Retail/ Residential	100+ DU/Acre	Attached or Integral Parking Structure
Hotel 	T4, T5	4+ Story	Retail / Hotel		Surface Parking or Parking Structure
Linear Office 	T4, T5	3-5 Story	Retail/Office	1.0-2.5 FAR	Surface Parking or Detached Parking Structure
Office on Podium 	T5	6+ Story	Retail/Office	2.5+ FAR	Integral or Detached Parking Structure
Retail / Office 	T3, T4	1-2 Story	Retail	0.5-1.0 FAR	Surface Parking or Detached Parking Structure
Community Building 	T3, T4	1-2 Story	Community Building	N/A	Surface Parking

# PUBLIC REALM TYPE MATRIX

Type	Illustration	Precedent Image	Configuration	Landscape/Pedestrian Amenities
Mixed-Use Main Street			<ul style="list-style-type: none"> <li>One travel lane in each direction</li> <li>Bikes share lanes with cars</li> <li>Angled or parallel parking both sides</li> <li>Wide sidewalks (12 to 18 feet)</li> </ul>	<ul style="list-style-type: none"> <li>Canopy shade trees, open form for signage visibility</li> <li>Landscape/furnishing zone along curb, benches, etc</li> <li>Tree planters allowed not required in parking lanes</li> <li>Optional "rumble strip" median and tree planters</li> </ul>
Neighborhood Avenue			<ul style="list-style-type: none"> <li>One travel lane in each direction</li> <li>Buffered Class 2 bike lanes</li> <li>Parallel parking both sides</li> <li>Moderate sidewalks (6 to 8 feet)</li> </ul>	<ul style="list-style-type: none"> <li>Street trees in parkway and parking lane planters</li> <li>Parkway bioswales for stormwater quality</li> <li>Stormwater infiltration in street tree planters</li> <li>Ground plantings native/adaptive low water use</li> </ul>
Neighborhood Street			<ul style="list-style-type: none"> <li>One travel lane in each direction</li> <li>Bikes share lanes with cars</li> <li>Parallel parking both sides</li> <li>Moderate sidewalks (5 to 6 feet)</li> </ul>	<ul style="list-style-type: none"> <li>Street trees in parkway and parking lane planters</li> <li>Parkway bioswales for stormwater quality</li> <li>Stormwater infiltration in street tree planters</li> <li>Ground plantings native/adaptive low water use</li> </ul>
Neighborhood Lane/ Alley			<ul style="list-style-type: none"> <li>One travel lane in each direction</li> <li>Bikes share lanes with cars</li> <li>No parking</li> <li>No sidewalks (pedestrians share lanes)</li> </ul>	<ul style="list-style-type: none"> <li>One travel lane in each direction</li> <li>Bikes share lanes with cars</li> <li>No parking</li> <li>No sidewalks (pedestrians share lanes)</li> </ul>

Type	Illustration	Precedent Image	Configuration	Landscape/Pedestrian Amenities
Park			Fronted by streets and buildings Variety of spaces/activities Designed for users of all ages	Fronted by streets and buildings Variety of spaces/activities Designed for users of all ages
Plaza			Defined by buildings on 1 to 3 sides Activated by ground floor uses	Defined by buildings on 1 to 3 sides Activated by ground floor uses
Paseo			Pedestrian-only passage/shortcut Overlooked by housing or commercial Shops/restaurants may front Housing may front if "rosewalk"	Pedestrian-only passage/shortcut Overlooked by housing or commercial Shops/restaurants may front Housing may front if "rosewalk"

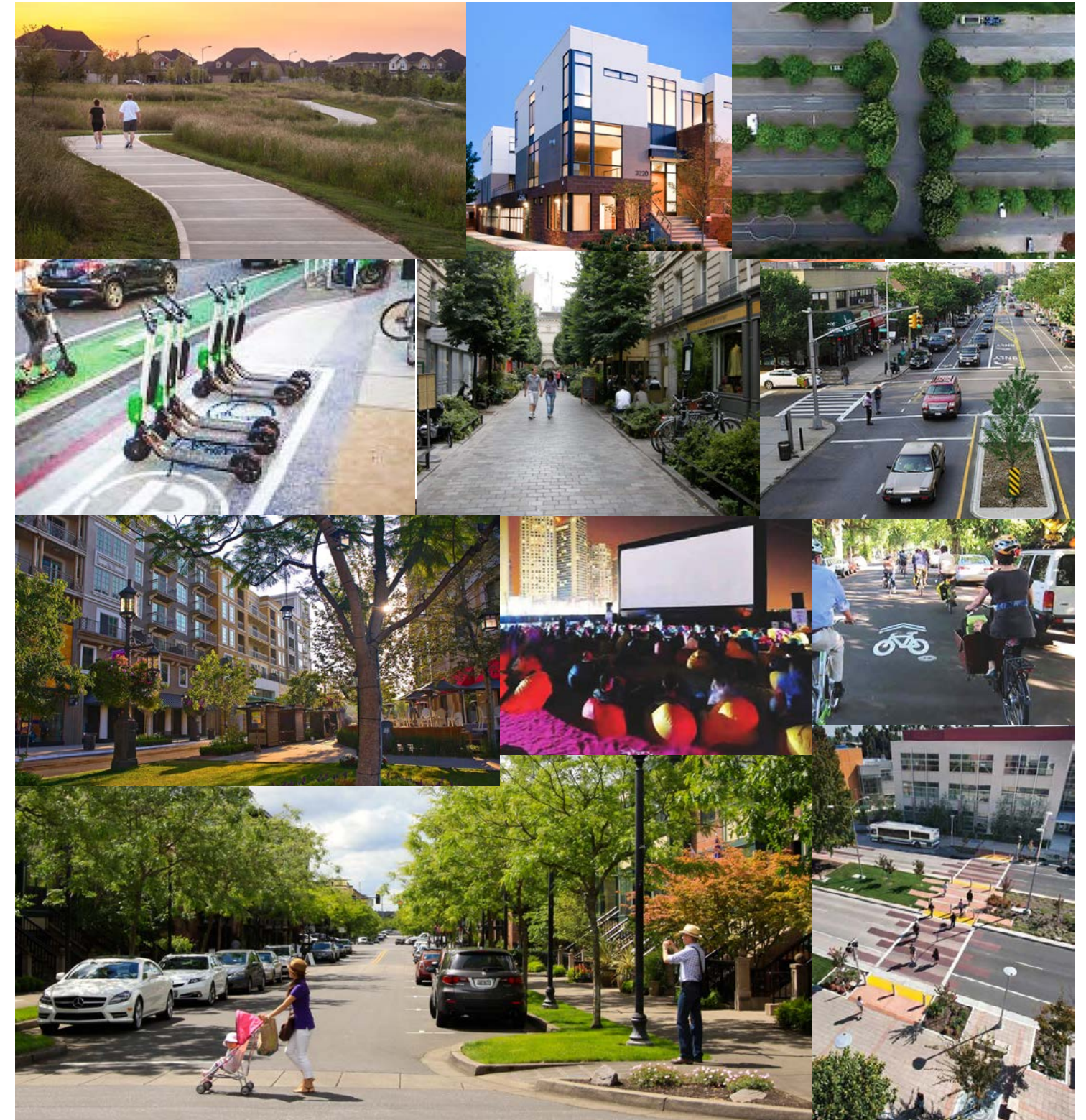
# FRONTAGE TYPE MATRIX

Type	Illustration	Precedent Image	Design Intent	Landscape/Pedestrian Amenities
Yard/Porch			Yards provide a physical transition from the Public Realm to the private residence. Porches activate street frontages with residents that provide “eyes on the Street.”	Single-family dwellings should have primary entries accessible directly from the sidewalk/Public Realm.
Stoop			Stoops are elevated entry stairs placed close to the frontage line with the ground story elevated from the sidewalk, securing privacy for the windows and front rooms.	Stoops shall be placed on the primary façade and entrance of a dwelling.
Fence and Hedge			Fence and Hedge frontages provide a green buffer for residential ground-floor uses at heavily-trafficked thoroughfares. The Fence and Hedge frontages provide privacy.	Hedge shall be thick enough to obscure the fence. Fence tops shall not be visible above hedge upon maturation of landscaping.
Terrace			Terraces provide outdoor dining and seating for ground-floor commercial uses. Terraces may be accessed from the building or directly from the adjacent sidewalk.	Terraces must be setback sufficiently from the curb to accommodate the pedestrian right-ofway and street trees.
Shopfront			Shopfronts provide direct access to ground-floor spaces and are typically associated with retail uses but may accommodate other uses. Shopfront frontages may provide outdoor seating areas and outdoor displays.	Entries shall be set at the adjacent sidewalk or within an alcove that is adjacent to a sidewalk. . Product displays (e.g. flowers, food, merchandise displays) are encouraged near shopfront entries.

# Next Steps

This Conceptual Corridor Plan is the bridge between the vision and policies of the General Plan, and the implementation documents that will encourage, support and guide reinvestment in the Corridor going forward. Actions that this Plan will support include:

- **Updating the General Plan:** The City will need to amend the General Plan to incorporate the concepts of this Plan and further prioritize and encourage investment in the Corridor.
- **Updating Zoning:** The City will need to update zoning, either through revisions to the Special Planning Areas, base zoning districts, or overlay districts, to more fully define the standards and guidelines for new development of vacant land or redevelopment of previously developed parcels. Those standards - like most zones throughout the City - are focused on defining parameters for building design and use. Elements to be added include standards for:
  - Inserting new local street networks and walkable block structures into large existing parcels;
  - Ensuring that new development fronts those streets with human-scale, pedestrian-oriented frontages;
  - Shared parking arrangements at various scales for different mixes of uses;
  - Refining the design of Kammerer Road itself to increase its compatibility with each of the sub-areas through which it passes.
- **Updating Street and Subdivision Standards:** Standards specific to making walkable mixed-use environments will be added to these important implementation documents, which will reduce or avoid the need to prepare specific plans for walkable mixed-use areas. These updated standards together with updated zoning will enable such places to be generated routinely.



# APPENDIX



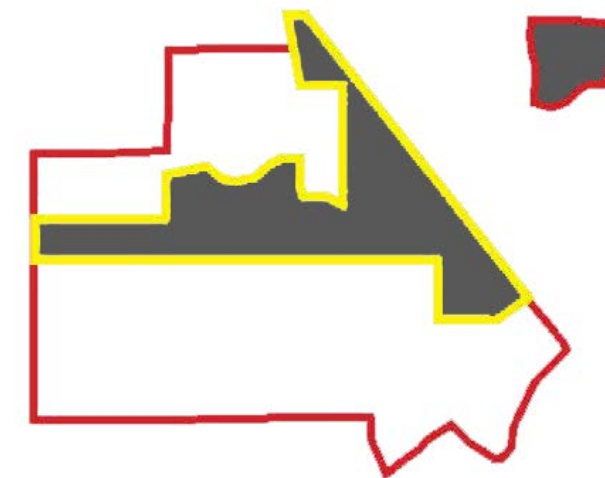
# Precedent Study

## Reston Town Center, VA



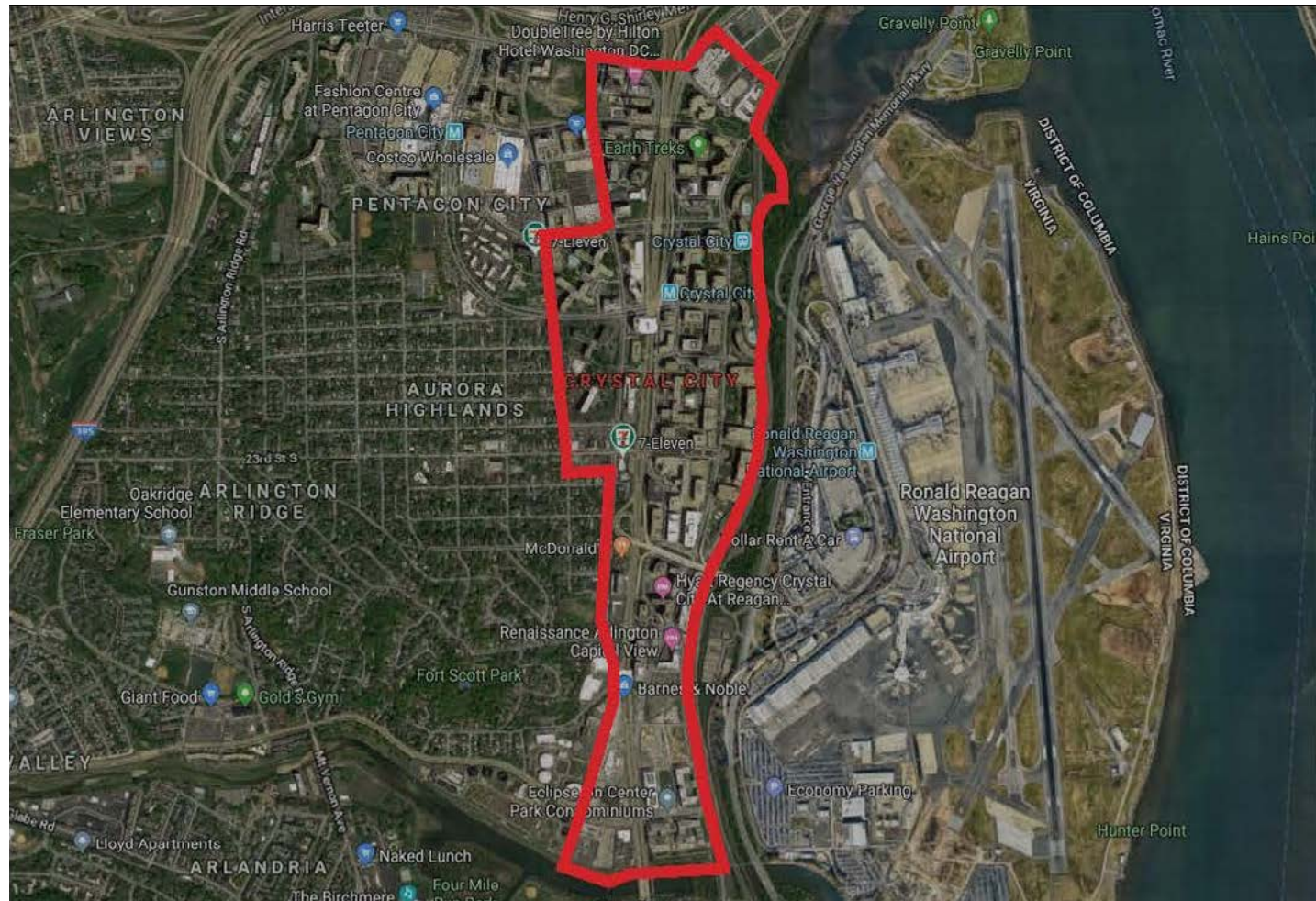
- “Work, Play, Live” Motto - evolve from an office dominated district to a more varied urban core
- Commercial heart of a utopian new town in the suburbs
- Had mid rise and high rise residential, urban density and intensity associated with traditional urban downtowns
- Transit oriented - will have own Metrorail Stop
- Has a Historic Trust and Museum and two towers and retail

- Based on an expansive grid of rectangular blocks allowing for the evolution and expansion vs a closed and contained planned project
- Organic approach to densification
- Placemaking - has its symbolic center (Mercury fountain). Appealing walking district - programmed events in the parks and plazas



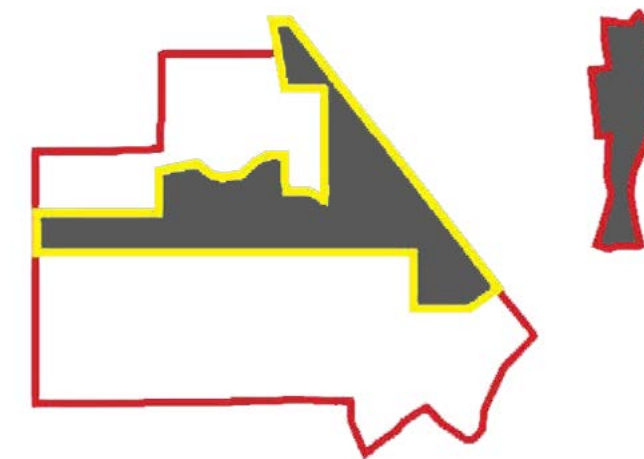
# Precedent Study

## Crystal City, VA



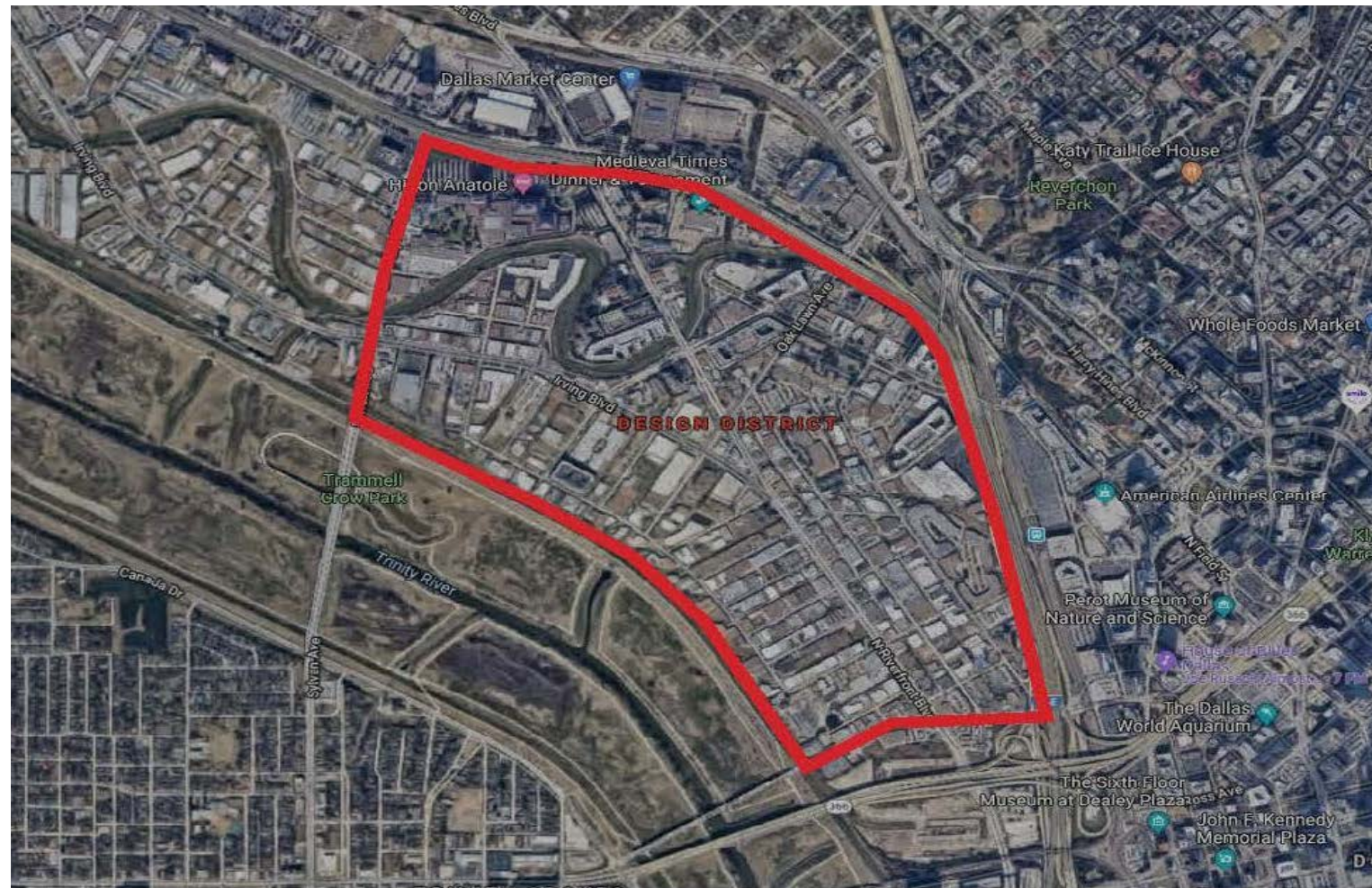
- An urban community in northern Virginia located less than 3 miles south of downtown Washington, DC.
- Vision: a complete community where one may grow up and grow old
- Quality public parks accessible to all
- Vibrant street-level retail throughout Crystal City
- Well-defined and complete streets that provide equally for traffic and pedestrians

- The calming and humanizing of highway with expansive landscaping and attractive building frontages along its edge
- Fully integrated and accessible multi-modal transit
- A full mix of uses typical of a complete urban community
- Amazon HQ2



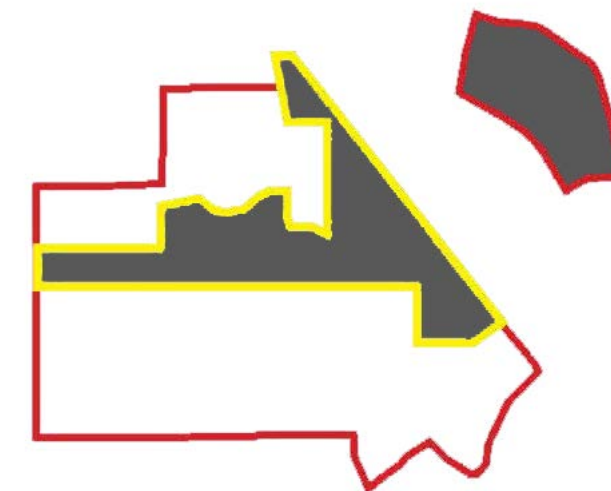
# Precedent Study

## Dallas, TX



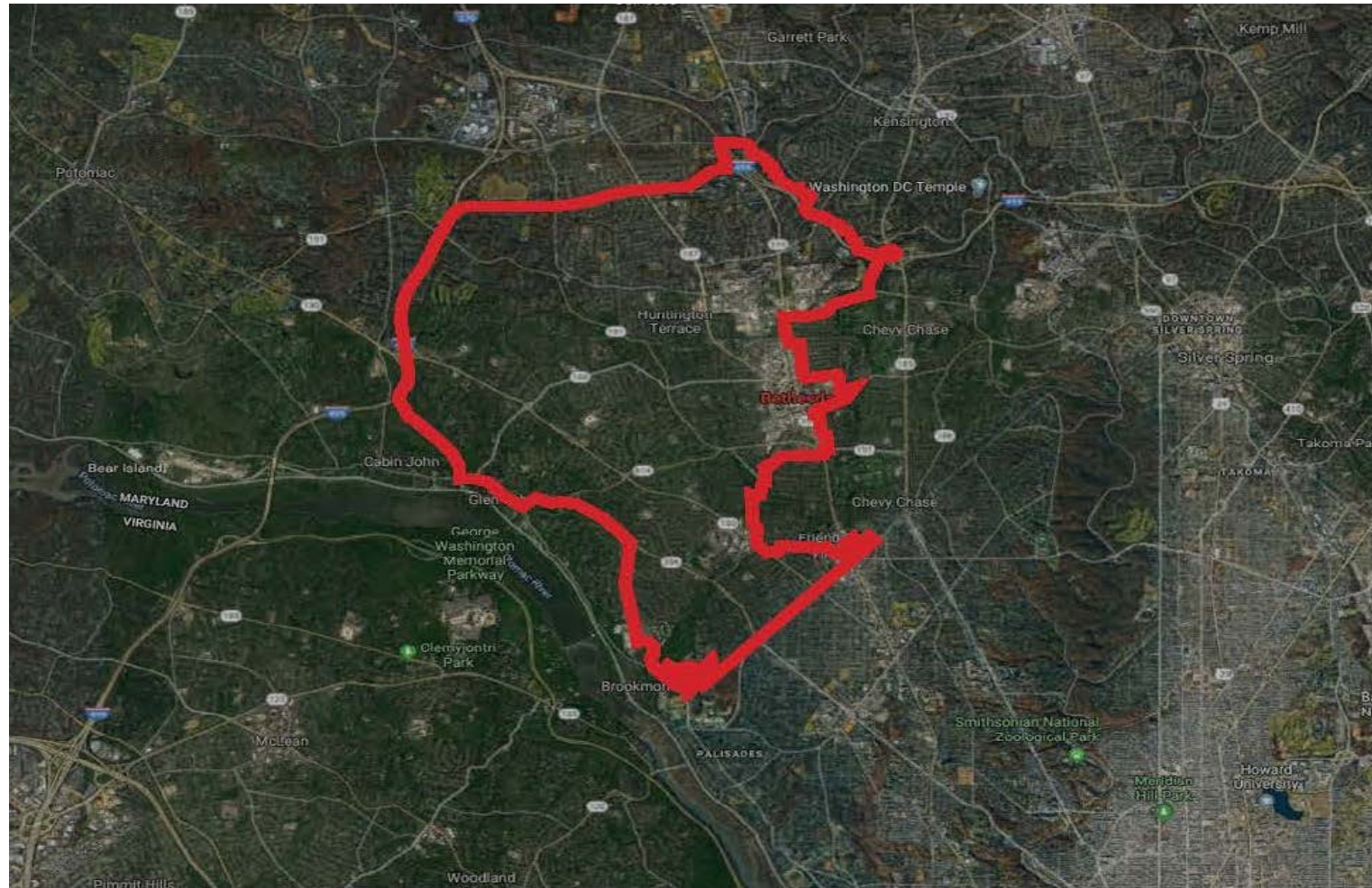
- The design district is an industrial-chic enclave known for its fine-art dealership, showrooms and stores, art galleries displaying works by leading contemporary artists
- Pedestrian priority streets - Enhanced connections with comfortable foot travel as key priority
- A vibrant public realm with diverse food and drink scene
- Traffic Calming - reduces the risk of harm and supports multi-modal transportation

- Development controls - encourage access to a wide range of active uses and limit the impacts of building operations



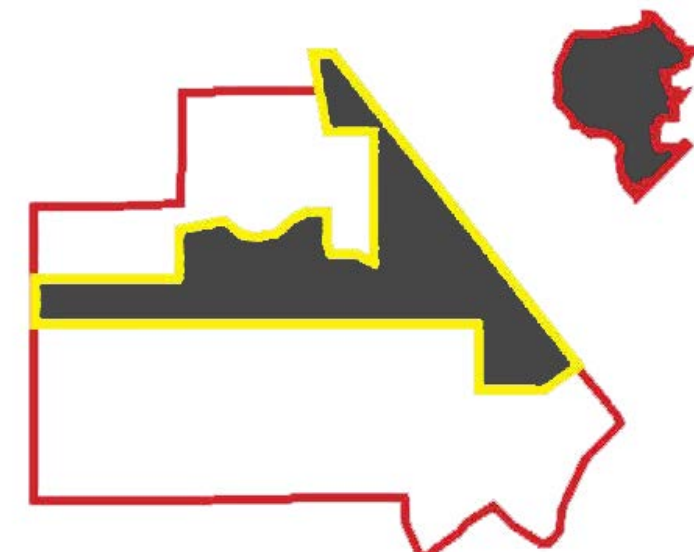
# Precedent Study

## Downtown Bethesda, MD



- Unincorporated, census-designated place in southern Montgomery County, Maryland
- Has a Small-Town feel. Is comprised of commercial, offices, retail, hotels, entertainment, schools...
- Has increasingly renovated older homes. Former amusement park renovated into a partnership for arts and culture
- Is within reach of destinations and weekend getaways

- Distinct character of existing neighborhoods and activity centers
- Public realm and housing improve quality of life for all equally
- Increased public green spaces, enhance habitat connectivity
- Well-connected network of walkable and bikable streets, trails and open spaces for all



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