



# HQTA Toolkit

HIGH QUALITY TRANSIT AREA  
PILOT PROJECT

Southern California  
Association of Governments

March 2019



## Acknowledgments

### Southern California Association of Governments (SCAG)

Grieg Asher, AICP, Project Manager  
Jason Greenspan, AICP, LEED-GA, PP,  
Manager of Regional Sustainability  
Steve Fox, Senior Regional Planner

### Gruen Associates (Prime Consultant)

Adam Maleitzke, AICP, Project Manager,  
Director of Planning  
Orlando Gonzalez, Senior Urban Designer  
Elaine Carbrey, AIA, AICP, Associate Partner  
Kamille Parks, Urban Designer/Planner

### HR&A (Economics)

Amitabh Barthakur, Principal  
Judith Taylor, Principal  
Riddhi Chakraborty, Analyst

### Iteris (Transportation)

Viggen Davidian, PE, Vice President  
Deepak Kaushik, PE, Senior Transportation  
Engineer

# HQTA Toolkit

## HIGH QUALITY TRANSIT AREA PILOT PROJECT

### Southern California Association of Governments

March 2019



The preparation of this report was financed in part through grants from the Federal Transit Administration, U.S. Department of Transportation. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

Additionally, the contents of this report reflect the views of the author who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of SCAG or DOT. This report does not constitute a standard, specification, or regulation.

## In this Toolkit

The HQTA Toolkit is designed to implement Transit-Oriented Development (TOD) within the Region's HQTAs. An outline for the Toolkit is presented below:

### PART 1 Introduction

The HQTA Pilot Project offers technical assistance and planning services to station areas that have a high potential for transit-supportive development patterns and future growth.

### PART 2 Toolkit

The Toolkit includes contemporary best practices for TODs, open space, and complete street projects that are tailored to the desired place types for a HQTA. Those toolkit options are organized as follows:

### PART 3 Additional Resources

Federal, regional, and local funding sources for complete street, open space and placemaking, and TOD projects are provided in addition to other resources Cities may find useful in evaluating their own HQTAs.

**Purpose and Introduction to HQTAs**

pg. I-2



**A - Complete Streets**

pg. II-A-1



**A - Funding Sources**

pg. III-A-1



**SCAG Region Issues, Goals, and Objectives**

pg. I-4



**B - Open Space / Placemaking**

pg. II-B-1



**B - Additional Resources**

pg. III-B-1

**Benefits and Components of TODs**

pg. I-6



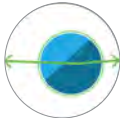
**C - Building Types & Precedents**

pg. II-C-1



**HQTA Place Types**

pg. I-9



**THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK**

## Introduction

Implementation of the Station Area Vision is accomplished through specific physical improvements. The HQTAToolkit provides a collection of individual elements (infrastructure and policy) based on contemporary best practices that can be combined to improve the public realm for people who walk, bicycle, and take public transit.

### How to Use this Toolkit

#### Purpose

#### Issues, Goals, and Objectives for the SCAG Region

#### Benefits and Components of TODs

#### HQTA Place Types



## Purpose

### Vision

In the 2016 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), the Southern California Association of Governments (SCAG) established a vision for future investment in the communities of the Southern California region: **to develop sustainable communities where people enjoy increased mobility, greater economic opportunity, and a higher quality of life.** This vision was developed through years of community planning, incorporating all the diverse physical forms and individual perspectives of the region. The core physical elements of that vision include:

- Compact and walkable communities, seamlessly connected with public transportation, that allow people to live active and healthy lifestyles;
- Well maintained transportation networks that effectively utilize public tax dollars;
- Sustainable, multi-modal transportation system that improves air quality and reduces the region's climate change contribution; and,
- Housing supply that is sufficient to meet the needs of a growing population, affordable, and provides equal economic opportunity to diverse neighborhoods across the region.

### Implementing the Vision within High Quality Transit Areas

At the heart of this vision is to concentrate transit-oriented development (TOD) within High Quality Transit Areas (HQTA). A HQTA is defined as an area along transit corridors or near major transit stations that have, or will have in place, 15 minute service, or better, during peak commuting hours; SCAG identified these areas through the development of the 2016/2040 RTP/SCS. Between 2016 and 2040, 46 percent of new housing and 55 percent of new employment within the six county SCAG region is expected to be developed within HTAs. Though well-served by transit, an HQTA may not necessarily be a transit-oriented community (TOC). TOCs are based on the principles of TODs, but place greater emphasis on significant changes in land use patterns, socioeconomic outcomes, and travel patterns at the neighborhood scale. To achieve the regional vision, communities must make infrastructure investments that support walkable, compact communities that integrate land use and transportation planning for a better functioning built environment.

These investments in active transportation and higher density development should be made through sensitive design that responds to existing physical conditions of the surrounding context - focusing TOD investments to make areas more walkable while complementing existing community character. Sensitive designed TODs can preserve existing development patterns and neighborhood character while providing a balance of modes and housing choices.

### Purpose of the Toolkit

In 2017, SCAG launched the first round of the HQTA Pilot Project. The Pilot Project offers technical assistance and planning services to station areas that have a high potential for transit-supportive development patterns and future growth. Once Station Area Vision Plans are created, SCAG will work with Pilot Project jurisdictions to track the progress towards meeting a variety of regional objectives, such as lower greenhouse gas emissions and increased transit ridership.

Generally, this Toolkit is a tool for guiding the development of Station Area Vision Plans and their implementation. It includes strategies and investments for people who walk, bike, and take public transportation, while balancing considerations for drivers and other modes. Specifically, this document provides a range of physical investments and strategies to construct, and measure the impacts of well-designed TODs. The individual physical elements addressed by this document are identified in a typical

half-mile station area diagram shown on the following page.

This Toolkit is meant to be used as a resource for SCAG, municipalities, and individual developers to build quality TOD within the region's HTAs in order to address a number of regional issues and achieve a number of regional goals and objectives; these issues, goals, and objectives are enumerated on the following pages.

The HQTA Toolkit is a "living document" and is designed to be regularly updated with additional TOD amenity precedents over time.



## High Quality Transit Areas

The first step in planning for TOD is to determine the location and limits of the HQTAs. A HQTAs is defined in the RTP/SCS generally as a walkable transit village or corridor, within one half-mile of a well-served transit stop or a transit corridor with 15-minute or better service frequency (headways) during peak commute hours. This definition of a HQTAs is based on the following Senate Bill (SB) 375 language, which provides the legal framework for funding of active transportation, TOD, and other infrastructure projects oriented towards reducing GHGs:

**Major Transit Stop:** A site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

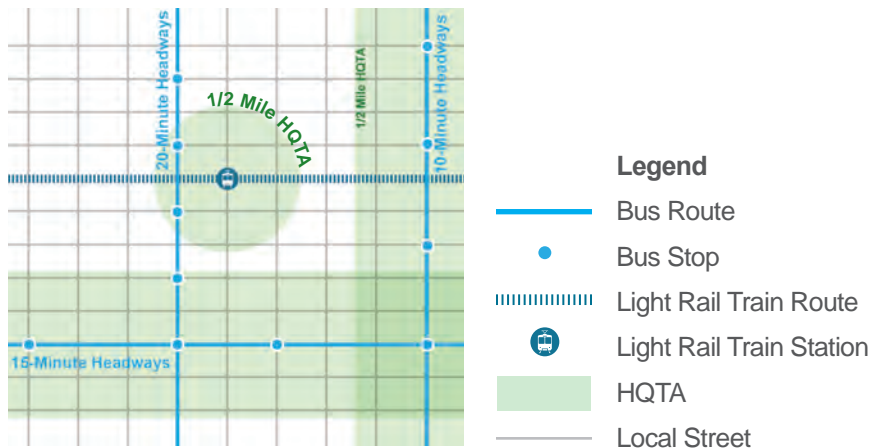
**High Quality Transit Corridor (HQTAs):** A corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

The figure below shows hypothetical HQTAs based on the SB 375 language for various transit route frequencies.

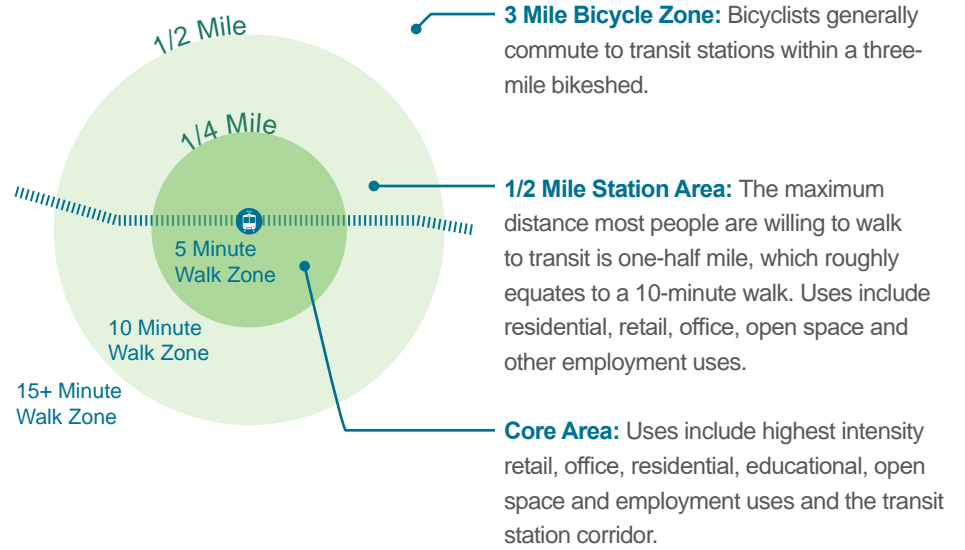
Within the HQTAs, there are individual zones that have implications for TOD planning. The HQTAs station/stop is surrounded by relatively high-intensity development, with intensity of development gradually reducing outwards to be compatible with lower-density uses as shown in the figure at right top.

The figure at right shows the location of all HQTAs within the SCAG region by 2040, which is based on the expected build-out of scheduled public transportation projects.

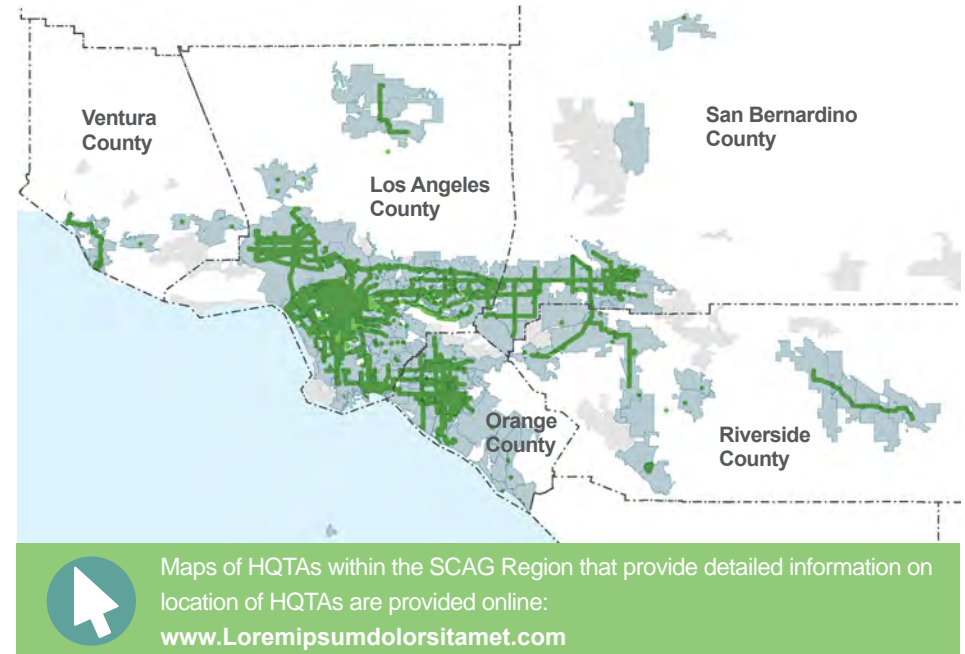
### Qualifying HQTAs based on Transit Frequencies



### HQTAs Zones



### Location of HQTAs in the SCAG Region



Note: Per the 2016/2040 RTP/SCS, there are no HQTAs identified for Imperial County.

## Issues in the SCAG Region

The vision set forth in the RTP/SCS addresses major issues facing the SCAG Region today:

- Environmental justice
- Affordability
- Population growth and displacement
- Air quality
- Economic development
- Transportation access and safety
- Goods movement
- Public health
- Climate change

All these issues facing the Region are interconnected. They are the consequence of past investments in sprawling development and auto-centric transportation infrastructure when land use and transportation planning were isolated disciplines. In hindsight, the auto-centric development patterns were made without consideration for the potential impacts to air quality, public health,

neighborhood fabric, and other factors. The new vision for the SCAG Region, centered on TODs within HQTAs integrates transit-supportive land uses with a variety of transportation options. A new urban development pattern applies the context and technologies of the 21st Century to produce walkable, affordable, healthy, sustainable, safe, and equitable communities.

### Geographic Scales of TOD Planning

While major issues are perceived regionally, it is the individual parcels, blocks, and neighborhoods that produce the physical conditions that influence regional outcomes; they form the individual tiles of the regional mosaic. The same applies for the goals and objectives of the region. TODs occur at the individual scale where localized issues can match or be contrary to regional trends, but they are not isolated from its context. Understanding the value of how studying every scale impacts the success of TOD is

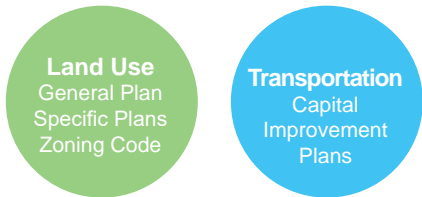
demonstrated through research from Center for Transit-Oriented Development (CTOD),

*“Planning for TOD occurs at the scale of the region, the corridor, the station area, and the land parcel, and these separate levels of planning should be coordinated to achieve the most successful outcomes. Planning at the regional scale serves to integrate regional goals, such as decreasing traffic congestion and improving public health, with regional contexts, such as a consideration of population growth and the location of major employment centers. Planning for TOD most often takes place at the station area level, and this is where it’s easiest to understand local benefits such as reduced transportation costs for residents, and the creation of a sense of place and community. Development projects are planned at the scale of the [individual] land parcel.”*

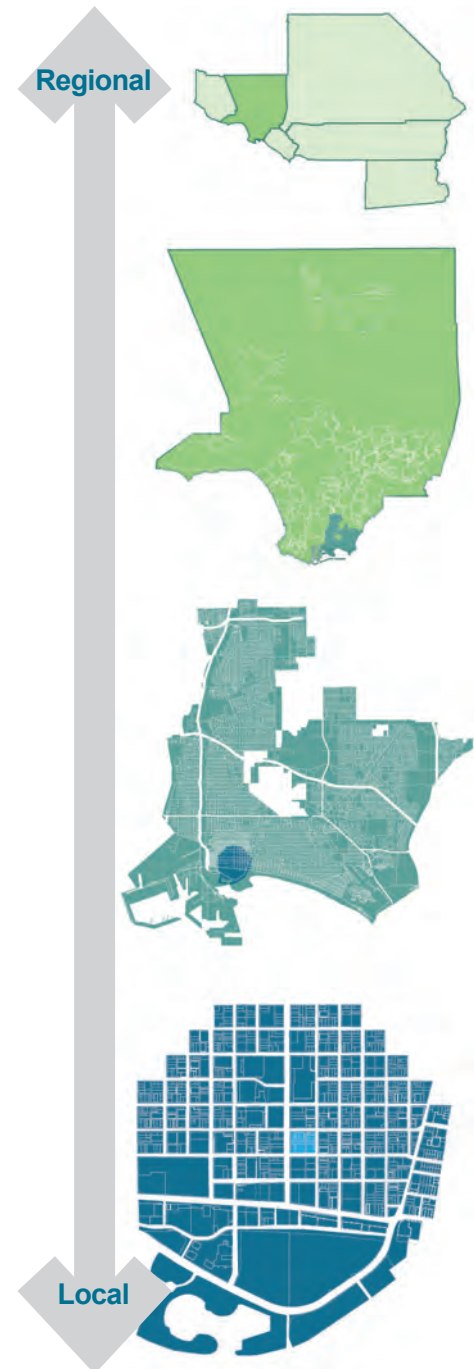
This Toolkit will provide the tools to implement individual projects both public and private that improve both local and regional livability.



### Traditional Planning



### New Approach to Planning





## Goals and Objectives for the SCAG Region

### Goals

The following are the broad goals of the 2016/2040 RTP/SCS designed to address the primary issues facing the SCAG Region, which also apply to this Toolkit:

- Align plan investments and policies with improving regional economic development
- Maximize mobility and accessibility for all people and goods in the region
- Ensure travel safety and reliability
- Preserve and ensure a sustainable regional transportation system
- Maximize productivity
- Protect the environment and health of the region’s residents by improving air quality and encouraging active transportation
- Actively encourage and create incentives for energy efficiency
- Encourage land use and growth patterns that facilitate transit and active transportation
- Maximize security of the regional transportation system



### Objectives and Metrics

The Pilot Project Vision Plans, guided by the strategies and investments contained in the Toolkit will help achieve the following 2016/2040 RTP/SCS objectives:

- 8 percent reduction in GHG emissions per capita by 2020, 18 percent reduction by 2035, and a 21 percent reduction by 2040 - compared to 2005 levels
- Improve regional air quality
- 4 percent increase in commute trips made by carpooling, active transportation (walking and biking) and public transit from current single occupant vehicle trips
- 7 percent reduction of vehicle miles traveled (VMT) per capita
- 17 percent reduction of vehicle hours (VHT) per capita for automobiles and light/medium duty trucks
- 1/3 increase in daily travel by public transit
- 39 percent reduction of delay on roadways per capita
- Create more than 351,000 jobs annually
- Reduce the amount of undeveloped (greenfield) lands by 23 percent
- Reduce the regional obesity rate from 26.3 percent to 25.6 percent in areas with land use changes

Once the Vision Plans are developed, SCAG will work with pilot project jurisdictions to track the progress of pilot projects towards meeting regional objectives through a set of metrics. Pilot projects that successfully reduce GHGs or meet other objectives will be held up as models for other station areas with similar characteristics. Taken together, successful pilot projects will help to address the major issues facing the SCAG Region today.

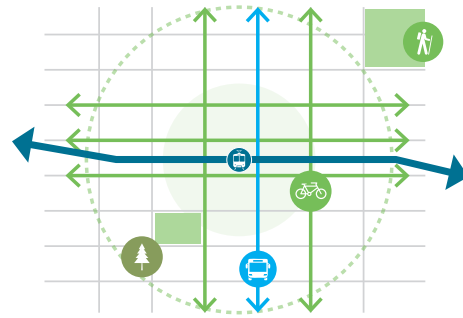
## Benefits of TODs

Transit-Oriented Development (TOD) is a form of urban development that is different than urban development that occurred during the sprawl that ensued after WWII. The postwar population boom led to a sprawling development pattern that was enabled by the construction of freeways and inefficient infrastructure and land use investments. TOD can accommodate inevitable future population and job growth that addresses the issues we face today, and focuses that new urban development in HQTAs that preserve and improve the quality of existing communities.

A new population boom offers the opportunity to reshape how the region grows. According to estimates by SCAG, Los Angeles County alone will add up to 1 million new residents by 2030. TODs are equipped to accommodate future growth while largely preserving existing neighborhood character.

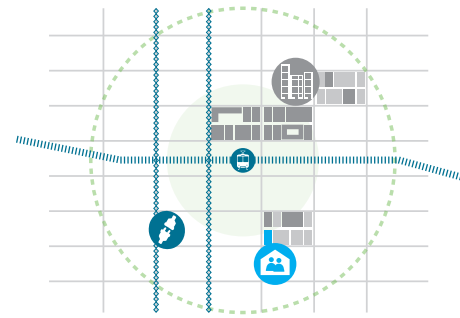
The illustration at right lists the numerous benefits of TODs, which have been grouped into the categories of environment, economic, and social.

### ENVIRONMENT



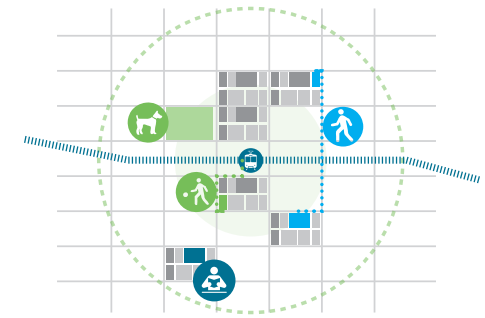
- Increased transit ridership
- Reduced VMT
- Reduced GHG
- Improved Air Quality
- Conservation of land and open space

### ECONOMIC



- Catalyst for economic development
- Redevelopment of vacant and underutilized properties
- Increased property value
- Decreased infrastructure costs
- Revenue for transit systems
- Reduced household spending on transportation
- Increase in affordable housing

### SOCIAL



- Increased housing and employment choices
- Greater mobility choices
- Health benefits
- Enhanced sense of community
- Enhanced public safety
- Increased quality of life

## Components of TODs



A typical HQTAs should include a mixture of housing, office, retail and/or other commercial development and amenities integrated into a walkable neighborhood and located within a half-mile of quality public transportation.

- 1 Mix of Land Uses / Higher Densities and Intensities**  
*GOAL: Encourage transit-supportive uses at higher densities and intensities in walking distance to transit stations/stops*  
 Design for flexibility to allow for future conversion to other uses  
 Provide for convenience retail that serves transit commuters
- 2 Street Design / Active Transportation**  
*GOAL: Balance the provision of pedestrian, cyclist, transit, and single-occupancy vehicles (SOVs) infrastructure by promoting “complete streets”*  
 Design amenities for all modes (shelters, storage, etc.)  
 Design streets with pedestrian and cyclist safety in mind  
 Employ traffic-calming devices to reduce collisions
- 3 Buildings / Urban Design**  
*GOAL: Promote attractive, pedestrian-friendly buildings that contribute to the character of a district and have active ground floor uses*  
 Promote building articulation and variety  
 Use a diverse palette of materials  
 Locate parking behind buildings and retail along streets  
 Design for flexibility to allow for future conversion to other uses
- 4 Parking: Strategies**  
*GOAL: Reduce reliance upon SOVs by managing the supply and demand of parking*  
 Shared, district-wide parking  
 Reduced parking supply  
 Reliance upon multiple modes to address mobility needs  
 Appropriately-priced parking to manage demand  
 Car-share, transit and cycling incentive programs
- 5 Open Space: / Placemaking**  
*GOAL: Design for active and passive recreational opportunities*  
 Privately-owned, publicly-accessible public spaces (POPs)  
 Publicly-owned civic spaces for passive + active recreation  
 Public spaces of a wide variety of types and programming

## TOD Performance Metrics

Baseline conditions for each HQTAs are established using the most recent version of the SCAG model (2016 RTP/SCS). Evaluation of the Pilot Project Buildout conditions includes modification to the SCAG model's Transportation Analysis Zones (TAZs) to represent the land use forecast to be built.

Each analysis of the Pilot Project Buildout proposed by the HQTAs Vision Plan used the **number of jobs, housing units, and population** to estimate the following metrics:

**Vehicle Miles Traveled (VMT) per capita** is a measurement of the number of vehicle trips multiplied by the distance of those trips (in terms of miles traveled). The total VMT (generated by the TAZ's within the HQTAs) is divided by the population within the HQTAs area to determine the VMT per capita. Data from all TAZ's within, or overlapping with, the HQTAs boundaries is included in the calculation.

**Vehicle Hours Traveled (VHT) per capita** is a measurement of the number of vehicle

trips multiplied by the duration of those trips (in terms of hours traveled). The total VHT (generated by the TAZ's within the HQTAs) is divided by the population within the HQTAs area to determine the VHT per capita. Data from all TAZ's within, or overlapping with, the HQTAs boundaries is included in the calculation.

**Travel mode share** within the HQTAs is calculated by obtaining the total origins and destinations (auto and transit) for each zone within the HQTAs, and calculating the travel

mode share based on raw model output data.

**Public transit usage** is calculated as the number of daily transit trips within the HQTAs.

**Vehicular delay** is calculated as the total daily vehicle delay on all roadway links within the HQTAs.

**Number of Jobs**



Transit-oriented communities have active local businesses and attract new economic development.

**Housing Units**




A higher density of housing units along transit routes increases residents' access to alternative modes of travel.

**Population**




Cities with population densities concentrated along transit routes are healthier, more economically stable, and produce less carbon emissions.

**Vehicular Delay**




A reduction in vehicular delay can reduce GHG emissions from idling cars.

**Travel Mode Share**




Streets designed for all modes of travel can reduce occurrences and severity of traffic collisions.

**Public Transit Usage**




An increase in public transit ridership reduces the number of single-occupancy vehicles on the road and provides revenue for cities.

**Vehicular Miles Traveled (VMT)**



A reduction in VMT eases traffic congestion, promotes active transportation, and reduces GHG emissions.

**Vehicular Hours Traveled (VHT)**



A reduction in VHT promotes mental health in commuters by reducing commute fatigue.

## HQTA Place Types

During the generation of growth scenarios for the 2016 RTP/SCS, SCAG developed a set of 35 place types that are based on observations of station areas in California and throughout the United States. Each place type is embedded with assumptions for density/intensity, land use type and mix, built form, and connectivity, each of which can be quantified and compared across many different stations. Place types are organized into “urban,” “compact,” and “standard.”

These place types recognize the rich diversity and wide variety of communities in the SCAG region. The goal of the HQTA program is not to replicate the same TOD model for each community, but rather to build upon the unique attributes of each city. Through this approach, each community can identify its strengths and opportunities to create compact, livable, walkable communities. Communities can refer to these place types as they define the current conditions and desired qualities of their HQTA.

Progress towards meeting these goals will be tracked through a series of targets and metrics identified in each Vision Plan. These targets include density, connectivity, primary mode of travel, and greenhouse gas reductions, among others. Of the 35 place types identified by SCAG, 17 meet or exceed density thresholds that will promote the use of high quality transit. These are listed in **bold** below. A more complete profile of each of the 17 place types is presented on the following pages. A summary table of metrics for each place type can be found in the “Additional Resources” section of this Toolkit.

### Urban

- **Urban Mixed Use**
- **Urban Residential**
- **Urban Commercial**
- **City Mixed Use**
- **City Residential**
- **City Commercial**

### Compact

- **Town Mixed Use**
- **Town Residential**
- **Town Commercial**
- **Village Mixed Use**
- **Village Residential**
- **Village Commercial**
- Neighborhood Residential
- Neighborhood Low

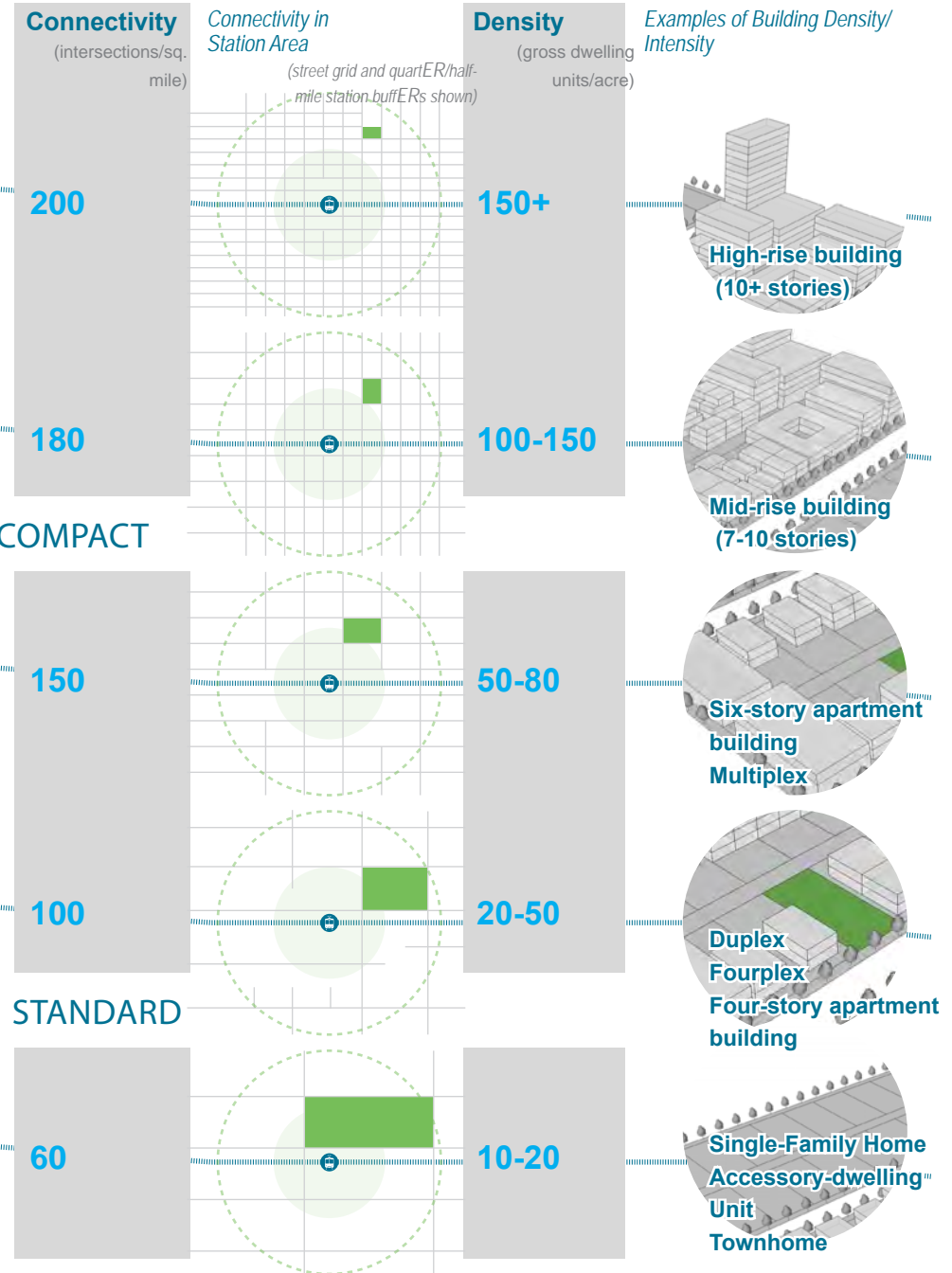
### Other

- **Campus / University**
- Institutional

### Standard

- **Office Focus**
- Mixed Office and R&D
- Office / Industrial
- Industrial Focus
- Low-Density Employment Park
- **High Intensity Activity Center**
- Mid Intensity Activity Center
- Low Intensity Retail-Centered Neighborhood
- Retail: Strip Mall / Big Box
- **Industrial / Office / Residential Mix High**
- Industrial / Office / Residential Mix Low
- **Suburban Multi-family**
- Suburban Mixed Use Residential
- Residential Subdivision
- Large Lot Residential Area
- Rural Residential
- Rural Ranchettes
- Rural Employment
- Open Space

## URBAN



# HQTA Place Types


## Urban Mixed Use



Land Use Mix		Residential Mix	
Residential	18%	SF Large Lot	0%
Employment	16%	SF Small Lot	0%
Mixed Use	45%	Townhome	0%
Open Space/Civic	21%	Multifamily	100%
Built Environment		Employment Mix	
Intersections per mi <sup>2</sup>	200	Office	80%
Average Floors	23	Retail	20%
Floors Range	15 – 100	Industrial	0%
Total Net FAR	9.0		
Gross Density Range (per acre)		Average Density (per acre)	
Household	40-500+	Household	85
Employee	50-500+	Employee	266

**Description**  
Urban Mixed Use districts are exemplified by a variety of intense uses and building types. Typical buildings are between 10 and 40+ stories tall, with offices and/or residential uses and ground-floor retail space. Parking is usually structured below or above ground. Workers, residents, and visitors are well served by transit, and can walk or bicycle for many of their transportation needs.

## City Mixed Use



Land Use Mix		Residential Mix	
Residential	28%	SF Large Lot	0%
Employment	17%	SF Small Lot	0%
Mixed Use	35%	Townhome	3%
Open Space/Civic	20%	Multifamily	97%
Built Environment		Employment Mix	
Intersections per mi <sup>2</sup>	200	Office	60%
Average Floors	7	Retail	40%
Floors Range	3 – 40	Industrial	0%
Total Net FAR	3.4		
Gross Density Range (per acre)		Average Density (per acre)	
Household	10-75	Household	44
Employee	25-165	Employee	85

**Description**  
City Mixed Use areas are transit-oriented and walkable, and contain a variety of uses and building types. Typical buildings are between 5 and 30 stories tall, with ground-floor retail space, and offices and/or residences on the floors above. Parking is usually structured below or above ground.

## Urban Residential



Land Use Mix		Residential Mix	
Residential	64%	SF Large Lot	0%
Employment	4%	SF Small Lot	0%
Mixed Use	12%	Townhome	0%
Open Space/Civic	21%	Multifamily	100%
Built Environment		Employment Mix	
Intersections per mi <sup>2</sup>	200	Office	22%
Average Floors	18	Retail	78%
Floors Range	5 – 60	Industrial	0%
Total Net FAR	9.0		
Gross Density Range (per acre)		Average Density (per acre)	
Household	75-500+	Household	131
Employee	0-50+	Employee	44

**Description**  
The most intense residential-focused type, Urban Residential areas are typically found within or adjacent to major downtowns. They include high- and mid-rise residential towers, with some ground-floor retail space. Parking usually structured below or above ground. Residents are well served by transit, and can walk or bicycle for many of their daily needs.

## City Residential



Land Use Mix		Residential Mix	
Residential	65%	SF Large Lot	0%
Employment	4%	SF Small Lot	0%
Mixed Use	11%	Townhome	3%
Open Space/Civic	20%	Multifamily	97%
Built Environment		Employment Mix	
Intersections per mi <sup>2</sup>	200	Office	40%
Average Floors	7	Retail	60%
Floors Range	5 – 40	Industrial	0%
Total Net FAR	2.9		
Gross Density Range (per acre)		Average Density (per acre)	
Household	35-75	Household	58
Employee	0-17	Employee	14

**Description**  
An dense residential-focused type, City Residential is dominated by mid- and high-rise residential towers, with some ground-floor retail space. Parking is usually structured, below or above ground. Residents are well served by transit, and can walk or bicycle for many of their daily needs.

## Urban Commercial



Land Use Mix		Residential Mix	
Residential	1%	SF Large Lot	0%
Employment	4%	SF Small Lot	0%
Mixed Use	12%	Townhome	0%
Open Space/Civic	21%	Multifamily	100%
Built Environment		Employment Mix	
Intersections per mi <sup>2</sup>	200	Office	93%
Average Floors	15	Retail	7%
Floors Range	15 – 100	Industrial	0%
Total Net FAR	6.0		
Gross Density Range (per acre)		Average Density (per acre)	
Household	0-40	Household	8
Employee	250-500+	Employee	402

**Description**  
Urban Commercial areas are typically found within major Central Business Districts. They are exemplified by mid- and high-rise office towers. Typical buildings are between 15 and 40+ stories tall, with ground-floor retail space, and offices on the floors above. Parking is usually structured below or above ground; workers tend to arrive by transit, foot or bicycle in large numbers.

## City Commercial



Land Use Mix		Residential Mix	
Residential	1%	SF Large Lot	0%
Employment	82%	SF Small Lot	0%
Mixed Use	4%	Townhome	0%
Open Space/Civic	14%	Multifamily	100%
Built Environment		Employment Mix	
Intersections per mi <sup>2</sup>	200	Office	77%
Average Floors	7	Retail	23%
Floors Range	5 – 40	Industrial	0%
Total Net FAR	3.1		
Gross Density Range (per acre)		Average Density (per acre)	
Household	0-10	Household	4
Employee	90-250	Employee	200

**Description**  
The central business districts of most cities contain areas exemplary of City Commercial, with many mid- and high-rise office towers and government buildings. Typical structures are between 4 and 40 stories tall, with ground-floor retail space, and offices on the floors above. Parking is usually structured, though many workers arrive by transit, foot, or bicycle.

# HQTA Place Types

## Town Mixed Use



Land Use Mix	Residential Mix
Residential 26%	SF Large Lot 0%
Employment 20%	SF Small Lot 0%
Mixed Use 29%	Townhome 0%
Open Space/Civic 25%	MultiFamily 100%

Built Environment	Employment Mix
Intersections per mi <sup>2</sup> 200	Office 75%
Average Floors 4	Retail 25%
Floors Range 2-8	Industrial 0%
Total Net FAR 1.9	

Gross Density Range (per acre)	Average Density (per acre)
Household 7-35	Household 21
Employee 25-70	Employee 50

**Description**  
Town Mixed Use areas are walkable mixed-use neighborhoods, such as the mixed-use core of a small city or transit oriented development, with a variety of uses and building types. Typical buildings are between 3 and 8 stories tall, with ground-floor retail space, and offices and/or residences on the floors above. Parking is usually structured, above or below ground.

## Village Mixed Use



Land Use Mix	Residential Mix
Residential 43%	SF Large Lot 15%
Employment 14%	SF Small Lot 15%
Mixed Use 14%	Townhome 29%
Open Space/Civic 28%	MultiFamily 41%

Built Environment	Employment Mix
Intersections per mi <sup>2</sup> 220	Office 42%
Average Floors 3	Retail 58%
Floors Range 2-6	Industrial 0%
Total Net FAR 1.0	

Gross Density Range (per acre)	Average Density (per acre)
Household 5-12	Household 10
Employee 5-40	Employee 14

**Description**  
Village Mixed Use areas are the walkable and transit accessible mixed-use cores of traditional neighborhoods. Typical buildings are between 2 and 6 stories tall, with ground-floor retail space, and offices and/or residences on the floors above. Parking is typically structured, tucked under, or placed behind buildings so that it does not detract from the pedestrian environment.

## Town Residential



Land Use Mix	Residential Mix
Residential 68%	SF Large Lot 0%
Employment 0%	SF Small Lot 0%
Mixed Use 10%	Townhome 47%
Open Space/Civic 22%	MultiFamily 53%

Built Environment	Employment Mix
Intersections per mi <sup>2</sup> 220	Office 47%
Average Floors 3	Retail 53%
Floors Range 2-8	Industrial 0%
Total Net FAR 1.2	

Gross Density Range (per acre)	Average Density (per acre)
Household 12-35	Household 18
Employee 0-25	Employee 12

**Description**  
Containing a mix of townhomes, condominiums and apartments (and occasionally small-lot single family homes), Town Residential is characterized by dense residential neighborhoods interspersed with occasional retail areas. Typical buildings are 2-5 stories tall, with limited off-street parking; residents tend to use transit, walking and bicycling for many of their transportation needs.

## Village Residential



Land Use Mix	Residential Mix
Residential 74%	SF Large Lot 26%
Employment 0%	SF Small Lot 26%
Mixed Use 1%	Townhome 49%
Open Space/Civic 26%	MultiFamily 0%

Built Environment	Employment Mix
Intersections per mi <sup>2</sup> 180	Office 100%
Average Floors 3	Retail 0%
Floors Range 2-5	Industrial 0%
Total Net FAR 0.9	

Gross Density Range (per acre)	Average Density (per acre)
Household 8-12	Household 10
Employee 0-5	Employee 2

**Description**  
Containing a mix of single-family homes on small lots and townhomes, Village Residential is characterized by traditional neighborhoods, designed to be supportive of transit service, walking and bicycling. Typical buildings are 2-3 stories tall, with small yards and an active focus on the public realm.

## Town Commercial



Land Use Mix	Residential Mix
Residential 1%	SF Large Lot 0%
Employment 69%	SF Small Lot 0%
Mixed Use 17%	Townhome 0%
Open Space/Civic 14%	MultiFamily 100%

Built Environment	Employment Mix
Intersections per mi <sup>2</sup> 200	Office 68%
Average Floors 3	Retail 32%
Floors Range 2-8	Industrial 0%
Total Net FAR 1.8	

Gross Density Range (per acre)	Average Density (per acre)
Household 0-7	Household 5
Employee 60-90	Employee 75

**Description**  
Equivalent to the center of a traditional town, or a more employment-focused transit-oriented development, Town Commercial contains a mix of commercial buildings set in a walkable context. Typical structures are between 2 and 8 stories tall, with ground-floor retail, and offices, services, and some residential uses on upper floors.

## Village Commercial



Land Use Mix	Residential Mix
Residential 0%	SF Large Lot 0%
Employment 61%	SF Small Lot 0%
Mixed Use 7%	Townhome 0%
Open Space/Civic 32%	MultiFamily 100%


Built Environment	Employment Mix
Intersections per mi <sup>2</sup> 230	Office 49%
Average Floors 2	Retail 51%
Floors Range 0	Industrial 0%
Total Net FAR 1.2	

Gross Density Range (per acre)	Average Density (per acre)
Household 0-5	Household 2
Employee 1-60	Employee 40

**Description**  
Equivalent to the center of a small town or district, or a lower-intensity employment-focused transit-oriented development, Village Commercial contains a mix of buildings set in a walkable context. Typical structures are between 2 and 5 stories tall, with some ground-floor retail, and offices, services, and some residential on upper floors.

# HQTA Place Types

## Suburban Multifamily



Land Use Mix	Residential Mix
Residential <b>87%</b>	SF Large Lot <b>0%</b>
Employment <b>0%</b>	SF Small Lot <b>0%</b>
Mixed Use <b>0%</b>	Townhome <b>11%</b>
Open Space/Civic <b>13%</b>	MultiFamily <b>89%</b>

Built Environment	Employment Mix
Intersections per mi <sup>2</sup> <b>90</b>	Office <b>85%</b>
Average Floors <b>3</b>	Retail <b>15%</b>
Floors Range <b>2-5</b>	Industrial <b>0%</b>
Total Net FAR <b>1.2</b>	

Gross Density Range (per acre)	Average Density (per acre)
Household <b>18-150+</b>	Household <b>32</b>
Employee <b>0-6</b>	Employee <b>2</b>

**Description**  
Predominantly containing apartments, condos, and town homes, Suburban Multifamily represents developments that may have internal walking paths but are set in an automobile-oriented context. While densities can be high enough to support bus transit, residents are likely to drive for most trips. Typical buildings are 2-5 stories tall, surrounded by surface parking lots.

## Office Focus



Land Use Mix	Residential Mix
Residential <b>0%</b>	SF Large Lot <b>0%</b>
Employment <b>82%</b>	SF Small Lot <b>0%</b>
Mixed Use <b>0%</b>	Townhome <b>0%</b>
Open Space/Civic <b>18%</b>	MultiFamily <b>0%</b>

Built Environment	Employment Mix
Intersections per mi <sup>2</sup> <b>45</b>	Office <b>93%</b>
Average Floors <b>4</b>	Retail <b>2%</b>
Floors Range <b>2-9</b>	Industrial <b>5%</b>
Total Net FAR <b>1.1</b>	

Gross Density Range (per acre)	Average Density (per acre)
Household <b>0</b>	Household <b>0</b>
Employee <b>35-150+</b>	Employee <b>65</b>

**Description**  
Representing the most intense auto-oriented single-use office areas, Office Focus is characterized by mid and high-rise office towers. Typical buildings are between 2 and 9 stories tall. Parking can be either structured or provided on surface lots. Workers tend to arrive by auto, though densities are high enough to support suburban transit service.

## High Intensity Activity Center




Land Use Mix	Residential Mix
Residential <b>14%</b>	SF Large Lot <b>0%</b>
Employment <b>37%</b>	SF Small Lot <b>0%</b>
Mixed Use <b>41%</b>	Townhome <b>6%</b>
Open Space/Civic <b>8%</b>	MultiFamily <b>94%</b>

Built Environment	Employment Mix
Intersections per mi <sup>2</sup> <b>130</b>	Office <b>20%</b>
Average Floors <b>5</b>	Retail <b>80%</b>
Floors Range <b>5-40</b>	Industrial <b>0%</b>
Total Net FAR <b>2.5</b>	

Gross Density Range (per acre)	Average Density (per acre)
Household <b>0.5-200+</b>	Household <b>24</b>
Employee <b>3-250+</b>	Employee <b>69</b>

**Description**  
High Intensity Activity Centers include a mix of moderate to intense densities of retail, office, and residential uses. They are often anchored by major regional retail centers or office parks, and while they can contain a robust mix of uses, they are most often oriented within an auto-oriented and non-walkable street and land use pattern. Parking can be structured and/or provided on surface lots.

## Campus/University



Land Use Mix	Residential Mix
Residential <b>32%</b>	SF Large Lot <b>0%</b>
Employment <b>2%</b>	SF Small Lot <b>0%</b>
Mixed Use <b>0%</b>	Townhome <b>0%</b>
Open Space/Civic <b>67%</b>	MultiFamily <b>100%</b>

Built Environment	Employment Mix
Intersections per mi <sup>2</sup> <b>150</b>	Office <b>64%</b>
Average Floors <b>8</b>	Retail <b>36%</b>
Floors Range <b>3-17</b>	Industrial <b>0%</b>
Total Net FAR <b>1.7</b>	

Gross Density Range (per acre)	Average Density (per acre)
Household <b>1-50</b>	Household <b>31</b>
Employee <b>10-100</b>	Employee <b>22</b>

**Description**  
College/University areas tend to be internally walkable, though they can be located in either a walkable or auto-oriented context. Buildings can range from 1 to 20+ stories, depending on the design of the campus. Parking may be plentiful or restricted; housing may be provided on-site in large amounts, or students may commute from homes in other locations.

Source: 2016 RTP/SCS

## Industrial/Office/Residential Mixed High



Land Use Mix	Residential Mix
Residential <b>58%</b>	SF Large Lot <b>0%</b>
Employment <b>36%</b>	SF Small Lot <b>0%</b>
Mixed Use <b>0%</b>	Townhome <b>4%</b>
Open Space/Civic <b>6%</b>	MultiFamily <b>96%</b>

Built Environment	Employment Mix
Intersections per mi <sup>2</sup> <b>60</b>	Office <b>73%</b>
Average Floors <b>4</b>	Retail <b>16%</b>
Floors Range <b>1-17</b>	Industrial <b>11%</b>
Total Net FAR <b>2</b>	

Gross Density Range (per acre)	Average Density (per acre)
Household <b>18-200+</b>	Household <b>45</b>
Employee <b>3-250+</b>	Employee <b>42</b>

**Description**  
Industrial/Office/Residential Mixed High is characterized by a wide-ranging, intensely developed mix of uses located in close proximity and set in an automobile-oriented context. Building heights can range from 1 to 15+ stories, and uses can include but are not limited to industrial, warehouses, offices, residential, and retail.