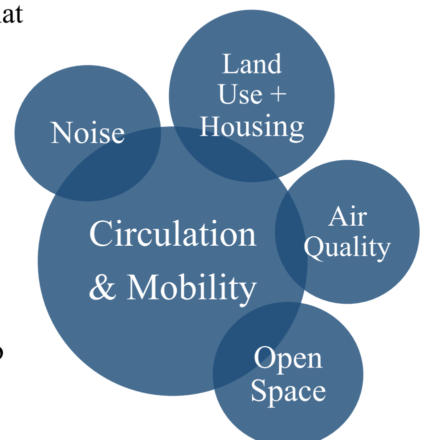
# Circulation & Mobility Element

## PURPOSE

The purpose of the Circulation and Mobility Element is to ensure that the City has a safe, efficient and equitable multi-modal transportation system that provides for the full range of the City transportation needs. It also addresses those segments of the local transportation system that interface with and serve as extensions of the regional system connecting Cathedral City with the rest of the Coachella Valley and other communities in Southern California. The element takes into account existing and long-term regional traffic and transportation infrastructure needs. The element is also correlated with community and regional land use plans to assure a diverse multimodal transportation network that moves motorized and non-motorized vehicles, and pedestrians, safely and efficiently through the City and region. The Circulation and Mobility Element also sets forth goals, policies, programs and standards that correlate the City's transportation system with the types, intensities and locations of land uses within the City. This element also serves as the blueprint for future land use policy decisions, social equity and economic vitality.

## BACKGROUND

The Circulation and Mobility Element is an infrastructure and mobility plan that provides connectivity between the various existing and planned land uses of the City and the region, and addresses the dynamic access issues associated with the mix of residential, employment, commercial, industrial and institutional uses in the community. In addition to its effects on the physical, social and economic environment of the City, the Circulation and Mobility Element also has a direct relationship with the Housing, Economic and Fiscal Health, Open Space and Conservation, Noise and Air Quality and Climate Stability elements. Mobility is also an issue of environmental justice and this element and the General Plan promote equal access to a variety of transportation options. The goals of the *Healthy and Sustainable Community Element* are also reflected and supported in this Circulation and Mobility Element.




Being integrally tied to the Land Use Element, the Circulation and Mobility Element is predictably influenced by the types, intensities and distribution of land uses within the community and surrounding area. Local and regional air quality issues are closely related to the efficiency of the local and regional transportation system. As the population in Cathedral City and the Coachella Valley continues to grow, vehicle miles traveled will increase and travel speeds will be reduced, resulting in higher emissions per mile traveled. The policies and programs established by the Circulation and Mobility Element play an important role in maintaining and enhancing the flow of vehicular traffic and other modes of travel and preserving air quality in the community.

The Circulation and Mobility Element has been developed as a comprehensive transportation management strategy, in conjunction with the City's Active Transportation Plan, General Plan Program EIR and City Capital Improvement Plan. It sets forth specific goals, policies and programs, which are based upon an engineering and computer modeling analysis of existing and projected future traffic conditions. Future vehicular traffic volumes have been forecast using the Cathedral City Transportation Model (a focused version of the RivTAM transportation model), anticipated buildout land use patterns and intensities, projected regional growth and a wide range of socioeconomic data, information and assumptions.

## Regulatory Environment

California Government Code sets forth the information and data analysis requirements of the Circulation and Mobility Element. Government Code Section 65302 requires that the element describe major thoroughfares and that their planned development be closely coordinated with the Land Use Element of the General Plan. It also requires that the element include development or improvement standards that are responsive to changes in demand for capacity created by implementation of the Plan.

Land use patterns and the existing transportation network play a direct role in the rate and growth of vehicle miles traveled (VMT). They influence the distance that people travel and the mode of travel they choose. Even with aggressive state and federal vehicle efficiency standards and the use of alternative fuels, meeting the State's greenhouse gas (GHG) reduction goals will require a reduction in how much the average Californian drives as well as a change in the type of vehicles we drive. Reducing miles traveled is challenged by conventional land use planning. For instance, between 1970 and 2000, California's population grew by about 70 percent, while vehicle miles traveled during that same period grew by 162 percent.

> *"Transportation determines how we get to the places where we live, work and play. It is imperative we advance an equity agenda that is people-centered, protects our health, encourages sustainable communities and gives everyone a voice in stimulating a vibrant economy."*
> *Joint Center for Political and Economic Studies*

Government Code Sections 65103(f) and 65080 et seq. require that the City coordinate Circulation Element provisions with applicable regional and state transportation plans. In the City General Plan planning area, the following agencies are responsible for preparing these transportation plans: Coachella Valley Association of Governments (CVAG), Southern California Association of Governments (SCAG), and California Department of Transportation (Caltrans). The state is also required to coordinate its planning efforts with those of local jurisdictions (§65080(a)); the federal government is under a similar mandate (§134, Title 23 of the U.S. Code).

The initiator and driving force in California to address climate change is State Assembly Bill 32 (AB 32), also known as *The Global Warming Solutions Act of 2006*. It requires the reduction of pollutants that contribute to greenhouse gas (GHG) emissions and climate change, including vehicular emissions. The California Air Resources Board (CARB) has identified passenger vehicles as the number one emitter of GHG emissions in California and asserts that improved land use and transportation policy are essential to meeting AB 32 goals locally and state-wide.

Another piece of landmark climate change legislation is Senate Bill 375 (SB 375). It builds on the existing regional transportation planning process and connects the reduction of transportation-related GHG emissions to regional land use and infrastructure planning. Under SB 375, all cities and counties are required to establish policies that reduce vehicle trips and vehicle miles traveled, and to encourage the use of transit and other forms of alternative transportation. It requires that the City forecast development patterns that integrate land use with transportation planning with the goal of increasing opportunities for alternative modes of travel.

Finally, consistent with SB 743 and Chapter 728 of the Statutes of 2008, popularly known as the *Sustainable Communities and Climate Protection Act of 2008*, the state encourages land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and contribute to the reductions in greenhouse gas emissions required in the California Global Warming Solutions Act of 2006 (Division 25.5 (commencing with Section 38500 of the Health and Safety Code). Similarly, the California Complete Streets Act of 2008 (Chapter 657 of the Statutes of 2008) requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways for safe and convenient travel.

## Community Constraints and Opportunities

Each region and community is faced with a particular set of constraints and opportunities that establish how transportation-related issues can best be addressed. Many of these are typical of those of Coachella Valley's "cove communities" that rely heavily on major east-west connectors to tie the City to other local communities and the regional network. Constraints include the Santa Rosa Mountains and Indio Hills, and major drainages of the Whitewater River and those north of US Interstate-10. The Union Pacific Railroad and Interstate 10 are also impediments to north-south travel in the northern portion of the City.

The City's Cove Neighborhood is located in a geographic cul-de-sac at the south end of the City with access to the local and valley roadway network from a few streets that intersect with East Palm Canyon Drive (Hwy 111). On the valley floor, portions of the City's roadway network are interrupted by major drainages, especially the Whitewater River, and by earlier development that eliminated parts of the street grid, thereby concentrating local traffic in some areas onto a constrained street grid.

## Regional Transportation Plans (RTPs)

The regional transportation plan (RTP) establishes regional goals, identifies present and future transportation needs, deficiencies and constraints, analyzes potential solutions, estimates available funding, and proposes areas of investments. Consistent with SB 375 and other legislation, RTPs include a sustainable community strategy to align transportation investments with a land use pattern designed to reduce travel and regional greenhouse gas emissions. In order to be eligible for federal and state funding, transportation projects must be consistent with the adopted regional transportation plan, including an applicable sustainable community strategy.


The City's local transportation plan complements and is consistent with the regional transportation planning efforts of CVAG and SCAG, and the City has been coordinating with these agencies in the updating of the City Circulation and Mobility Element and the RTP. The goal is to achieve an integrated and balanced regional transportation system, including mass transit, highways, railroads, bicycle and low-speed electric vehicles (LSEVs), walking, goods movement, and aviation. The RTP is meant to be action-oriented and pragmatic, and to consider both short-term and long-term issues. It establishes the region's priorities for funding transportation infrastructure projects and other transportation programs.

The RTP Guidelines promote multi-modal transportation networks and the identification of the financial resources necessary to accommodate them. As a near-term solution, local and regional transportation planning considers opportunities to accelerate projects that retrofit or rehabilitate existing roads to provide safe and convenient travel by all users. CV Link is a good example of this multiple use of regional flood control facilities. Regional planning requires working with CVAG, Riverside County and valley cities to ensure that local street and road standards are coordinated, complete and support the current and future needs of all transportation system users.

## Land Use and Transportation Planning

Now and in the future, the type, intensity and location (distribution) of land uses has a profound effect on the community's transportation system. Existing and future land use patterns shape the demand for transportation services and facilities. The efficient distribution of land uses has a direct effect on how, when and where traffic is generated and how well it is accommodated. Land use efficiencies are affected by densities, diversity and proximity of mixed land uses. The close correlation of land use and transportation planning reflects long-term development trends in the City and globally. Multi-modal networks encouraged by *Complete Streets* and *New Urbanism* are diversifying and making efficient and safe transportation more accessible and equitable. Included in this effort is moving toward a more closely integrated grouping of land uses, including "mixed-use" designations in the General Plan. Efficient land use planning can reduce the need to travel outside the neighborhood by, for example, providing shopping and other "services" within walking or biking distance of homes.

Through the year 2040 and beyond, it is assumed that the City will continue to diversify with the community providing affordable housing and a wide range of commercial services and employment opportunities. Permanent City and valley residents will continue to comprise the majority of community traffic, but seasonal traffic volumes increase on some major streets by up 30% between late fall and early spring. Low occupancy per vehicle, a substantial physical separation between employment and housing in the region, and the established roadway network are some of the transportation issues faced by the City and the Coachella Valley.

### Optimizing Land Use and Mobility

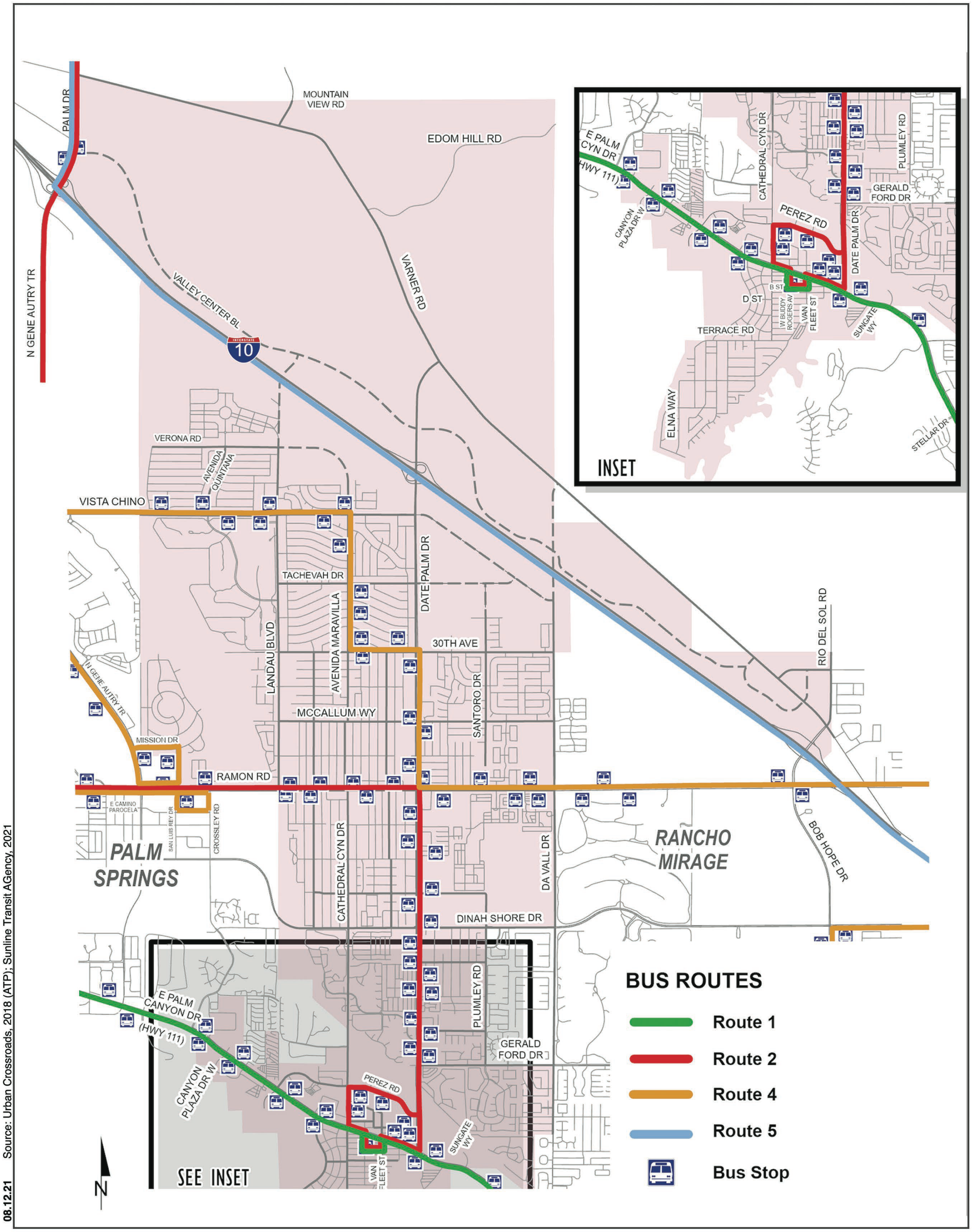

The Federal Highway Administration (FHWA) National Household Travel Surveys find that on average, 25% of vehicle trips are between home and work, while most of the other 75% are short trips -- running errands, picking up the kids and other local trips. Knowing this, land planning can better reflect the need for proximity and multi-modal accessibility from homes to schools and parks, shops and business centers. This proximity of complementary land uses and good multi-modal access allows more people to walk, bike or use low-speed electric vehicles (LSEVs) and reduces demand for roadway capacity.

SB 375 sets forth several mandates, including increasing vehicle occupancy, mixed-use and transit-oriented development, and use of mass transit systems. Cathedral City is well suited to take advantage of alternative modes of travel, especially golf carts, neighborhood electric vehicles (NEVs) and other LSEVs. With the high number of service jobs and residents that work in the service industry, the City should encourage the location of bus stops within a ten-minute walk, or easy bicycling distance between residential neighborhoods and employment centers. The City's neighborhoods can be protected from the impacts of noise, and vehicle emissions can be minimized by shortening or eliminating vehicle trips.

Coordinating land use and transportation planning is the basis for creating connected, accessible, and complete mobility networks. Due in part to the connection between transportation funding and greenhouse gas reduction established in SB 375, vehicle miles traveled (VMT) is an increasingly important metric of impact in the circulation element. Because the circulation element is required to correlate with the land use element, it must account for the features of the City as much as possible.

### Transit and Land Planning


In older cities, most urban development was more diversified with a mix of uses in proximity to one another and accessible by walking, or by horse (and wagon). Many towns and cities were founded along the coast or on navigable rivers and the earliest mass-transit was provided by boat. In the 19th century, railroads and trams were the next leg in mass transit. Train stations became centers of commercial activities providing buses, taxis and car rental services, hotels, restaurants, shopping, newsstands and convenience services. With the emergence of the "smart city" and the application of principles of *New Urbanism*, transit-oriented developments are becoming the basis for new urban villages incorporating employment centers, such as professional and medical office space, entertainment retail and high-density housing.



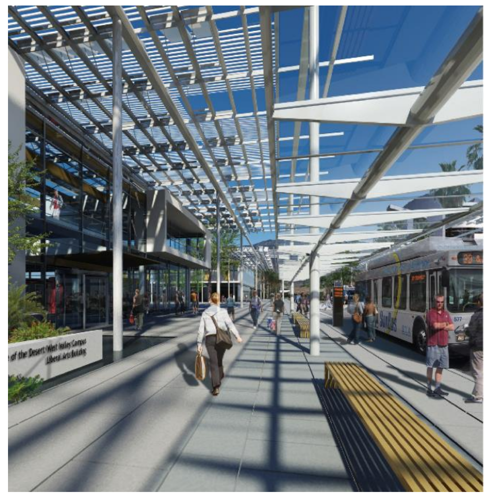

TERRA NOVA® PLANNING & RESEARCH, INC.

**Exhibit CM-1 - Sunline Transit Routes & Bus Stops (2021)**
**Cathedral City 2040 General Plan**

Cathedral City

SunLine Transit Agency services are not currently well utilized in the City or the region. SunLine reports that boardings on fixed-route buses decreased by 4.8% in its 2016/2017 fiscal year, and that a further reduction of 5.4% is expected in the 2018/2019 year[1]. Transit-oriented land planning may have limited application in the City in the immediate future, but it is evolving, and future efforts should be made to maximize the accessibility and efficiency of the bus transit system. Features that make transit systems efficient include short direct routes and minimum travel time between the point of origin and destination. Frequent buses on a route reduce headway (waits between buses) and thoughtful interconnectivity with other routes increases the efficiency of transfers.

The East Palm Canyon Drive corridor and the core downtown area of the City offer some potential for transit-based land use planning, as does Date Palm Drive. Higher-density mixed-use development planned in the northern portions of the City also provide opportunities for transit-oriented development. To be effective, higher density residential development should be planned in the vicinity of bus routes and must be affordable and appealing to those in the service and retail industries that are more likely to take advantage of and benefit from efficient transit services.



Transit-oriented residential development should also be located close to schools and commercial services. Bus stops should be located within a ten-minute walk of housing and major employment areas, and preferably within a five-minute walk. Residents within a 2.5-minute walk of a stop with frequent buses are likely to use an efficient bus route twice as much as residents within a five-minute walk. To enhance the available modal mix, major stops should include facilities that enhance the attractiveness of taking the bus, including providing shade, wi-fi, park-and-ride facilities, and parking for bicycles and golf carts, NEVs or other LSEVs.

To justify investment in transit-oriented facilities and services, critical levels of ridership are needed. Low-density and widely dispersed development results in fewer riders per route mile, and longer trips from trip origin to destination. Together with regional partners, the City and SunLine Transit Agency will work toward a balance of riders and destinations, and assure logical and efficient connections through simple and direct routes. Future development in the northern portions of the City will provide important opportunities for the type of integrated mixed-use neighborhoods that can be well-served by efficient bus service.

### Mobility at the Neighborhood Level

To the greatest extent practicable, local streets should serve primarily local neighborhoods. The City's roadway network ranges from small local streets to major arterial streets with six travel lanes. Major arterials define the edges of neighborhoods and separate them from others. Planned in coordination with land use, City streets should be distributed and scaled to address existing and projected demand. At the same time, the street system should be designed to assure that local traffic stays local, and regional travel is efficiently channeled to collectors and arterials. The roadway network should facilitate arterial use while protecting local neighborhoods from cut-through and other non-local traffic. This segregation of local and through-traffic occurs throughout the City and especially its gated communities.

### Traffic Calming and Safe Streets

Traffic calming is typically accomplished by imposing constraints on movement and speed. The use of traffic calming designs, such as narrower road widths, medians, and circuitous routes convenient only to local traffic, serve to protect neighborhoods from undue traffic impacts. Traffic calming slows down traffic and improves safety, requires greater awareness of the driver and results in fewer vehicle collisions and those involving pedestrians and bicyclists.

1 "Short-Range Transit Plan • FY 2018/2019", prepared by SunLine Transit Authority.

Traffic calming design is used to adjust the flow of traffic to levels compatible with surrounding land uses, such as residential neighborhoods, parks, schools and pedestrian-oriented shopping areas. Where more generous landscaping results from narrower paved streets, expanded multi-modal facilities and improved neighborhood appearance can be just some of the beneficial results.

Traffic calming must provide adequate access for police, fire and other emergency vehicles. A fundamental requirement is a minimum 20-foot clear lane for emergency vehicles along streets or alleys, regardless of whether on-street parking is permitted. Traffic calming and adequate emergency vehicle access can be achieved through thoughtful design of the roadway network to shorten segments of narrower streets, providing alleys for alternative access, parking restrictions along narrow streets, and through other means. Even with design features that assure adequate emergency access it may still be possible to reduce rights-of-way and pavement widths. Design elements include narrower lanes, chicanes (weaving patterns), mini-traffic circles, median-constrained slow points or chokers, and intersection pop-outs. Other devices include road bumps or speed tables, speed bumps and raised crosswalks; these devices each have their own pros and cons, and their use should be considered carefully.

### Goods and Materials Movement

Goods move through the City primarily at three levels, by rail, by truck and by passenger vehicle. Local airports provide some freight service but it is quite limited. Rail transport is a major activity in the northern portions of the City, but local service is indirect and serves major distribution centers, none of which are located in the City or most of the valley. Whether by truck, rail or passenger vehicle, freight movement is essential for the City to thrive, facilitating the exchange of needed goods and stimulating the local and regional economy. With the growth of on-line shopping has come a commensurate growth in delivery services by Fed-X, UPS and the USPS, which may reduce overall traffic associated with goods movements.

### Utility Services and Facilities

While the Circulation and Mobility Element focuses on moving people, goods and materials, the General Plan also addresses other public infrastructure, including drainage, water and sewer lines, electricity, telephone and cable. These will generally be comparable in scale to the capacity of the roadway, but their installation and maintenance within the right-of-way can sometimes conflict with roadway operations, including line-of-sight issues, unsatisfactory pavement closure and re-paving of utility trenches, and the manner and efficacy of traffic control. These facilities are discussed below and in the *Public Services and Facilities Element*.

## INDICATORS OF ROADWAY EFFICIENCY

The efficient movement of vehicular traffic on our local and regional roadways is critical to the normal day-to-day functioning of our community. Obstructions in traffic flow can have serious consequences, including economic loss due to delays in transporting goods, increased psychological stress for the traveling public, increased risk for motor vehicle and other accidents and increased emission of GHGs and other pollutants. The efficiency of a particular roadway can be determined by assessing the roadway's capacity, level-of-service, and average daily traffic volume, each of which is described below. It can also be determined based on how well a given roadway accommodates other modes of travel, including buses, bicycles, LSEVs and pedestrians. The following discussion focuses on the movement of motor vehicles.

### Level-of-Service

Roadway capacity is defined as the number of vehicles that may pass over a section of roadway in a given time period under prevailing conditions. Roadway capacity is most restricted by intersection design and operation, and by the number of access drives along a given roadway segment. The vehicular capacity of a roadway and the degree to which that capacity is being utilized is typically described as the roadway's "Level-of-Service" (LOS). Level-of-Service is a qualitative measure of the efficiency of traffic flow and is defined by alphabetical connotations, ranging from "A" through "F," that characterize roadway operating conditions.

LOS A represents an optimum or free-flowing condition, and LOS F indicates extremely slow speeds and system failure. Levels-of-Service are represented as volume-to-capacity (V/C) ratios, or vehicle demand divided by roadway capacity. V/C ratios smaller than 1.00 imply better operational characteristics and levels-of-service. V/C ratios that exceed 1.00 imply worse operating conditions and LOS F, where traffic demand exceeds roadway capacity. The table below defines the various LOS classifications.

**Table CM-1**
**Roadway Level Of Service Description**

| Level of Service | Quality of Traffic Flow |
|---|---|
| A | Primarily free-flow operations at average travel speeds usually about 90 percent of the free-flow speed for the arterial classification. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at signalised intersections is minimal. |
| B | Reasonably unimpeded operations at average travel speeds usually about 70% of the free-flow speed of the arterial classification. Ability to maneuver within the traffic stream is only slightly restricted. Stopped delays are not bothersome, and drivers generally are not subject to appreciable tension. |
| C | Traffic operations are stable. However, mid-block maneuverability may be more restricted than in LOS B. Longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50% of the average free-flow speed for the arterial classification. Motorists will experience some appreciable tension while driving. |
| D | Borders on a range where small increases in flow may cause substantial increases in approach delay and decreases in arterial speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or some combination of these factors. Average travel speeds are about 40% of the free-flow speed. For planning purposes, this level-of-serve is the lowest that is considered acceptable. |
| E | Characterized by significant approach delays and average travel speeds of one-third or less of the free-flow speed. Typically caused by some combination of adverse progression, high signal density (more than two signalized intersections per mile), high volumes, extensive queuing, delays at critical intersections, and/or inappropriate signal timing. |
| F | Arterial flow at extremely slow speeds, below one-third to one-fourth of the free-flow speed. Intersection congestion is likely at critical signalized intersections, with high approach delays and extensive queuing. Adverse progression is frequently a contributor to this condition. |

Source: Highway Capacity Manual, Transportation Research Board - Special Report 209, National Academy of Science, Washington, D.C. 2010.

Traffic engineers and transportation planners work to strike a balance between providing ideal roadway operating conditions and controlling the costs of infrastructure and right-of-way needed to assure those conditions. The need to accommodate other modes of travel as much as possible can also affect LOS for motor vehicles. For General Plan purposes, the upper level of LOS D is assumed to be the “acceptable” level-of-service for vehicular traffic on a given roadway in the City (see Tables CM-2 and CM-3).

The updated roadway classifications shown in Exhibit CM-8 has been based on a detailed analysis of the roadway network and the desire to maximize multi-modal access as required by the *Complete Streets* program, downsizing a few roadways and upsizing others. While the vast majority of roadways in the City are expected to operate at acceptable levels-of-service at General Plan buildout, several segments may operate at LOS E or F unless special designs, control measures or intersection improvements are implemented to mitigate traffic impacts in these areas.

Typically, capacity can be increased by adding travel or turning lanes, constructing raised medians, and/or restricting vehicle access to a roadway. By reducing the number of vehicle conflict points, traffic flow on a roadway can be substantially improved, avoiding the loss of capacity caused by disruptions to traffic flow from vehicles entering or leaving the roadway (see Section 2.16, General Plan Program EIR for more information about mitigating traffic impacts).

### Adaptive Application of Level of Service (LOS)

Determining whether a roadway is operating at an acceptable manner cannot be viewed solely on the basis of acceptability LOS. There is and will continue to be a need to provide adaptability in determining an acceptable level of service for a given roadway or intersection. Although accepting a lower level of service (LOS E or even F) at certain intersections and segments during peak season may result in periodic congestion; however, once familiar with network constraints, travelers will use alternative modes of travel, and/or seek alternative routes. Traffic will find its way to those parts of the network with surplus capacity and faster and safer travel.

Part of this consideration includes the application of the *Complete Streets* design philosophy, which is especially relevant to Cathedral City and is discussed below. While taking every measure to accommodate vehicular traffic may help move cars and trucks more efficiently through the community, this effort can result in streets that will not safely accommodate pedestrian, cyclists or LSEVs. Therefore, the need to move vehicles must be balanced with the need to provide opportunities for other modes of travel.

### Analyzing Intersection Operations

While travel lanes are important to move vehicles, intersections are generally the most constrained portion of the roadway network. In the General Plan Transportation Analysis study, intersection levels of service were analyzed using the Highway Capacity Manual (HCM) 2010 operations method. The Highway Capacity Manual expresses the Level of Service at an intersection in terms of delay or waiting time to get through the various intersection approaches. For signalized intersections, average total delay per vehicle is used to determine the LOS. Intersection LOS is defined quantitatively in the following table. A more detailed discussion of LOS values can be found in the General Plan Transportation Analysis in the Program EIR Technical Appendices.

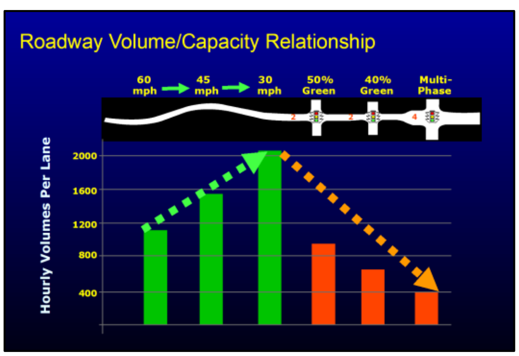
*"Motorists understandably dreaded this change (to a roundabout) before it was made. But they found that instead of waiting 24 seconds for a pedestrian to cross 72 feet of road, they now only wait 3-4 seconds, or don't wait at all. Businesses that feared the loss of customers arriving in cars actually improved their trade about 35 percent, new stores were built, noise levels were reduced 77 percent, and the value of land within walking distance climbed. Far more people started walking and bicycling."*
*Dan Burden, Walkable Streets Advocate*

**Table CM-2**
**Intersection Levels of Service (LOS)**
**(seconds per vehicle)**

| LOS | Description | Signalized Intersection Delay | Unsignalized Intersection Delay |
|---|---|---|---|
| A | Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation. | < 10 | < 10 |
| B | Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may be fully utilized and traffic queues start to form. | >10 and < 20 | >10 and < 15 |
| C | Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted | >20 and < 35 | >15 and < 25 |
| D | Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues. | >35 and < 55 | >25 and < 35 |
| E | Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. | >55 and < 80 | >35 and < 50 |
| F | Forced flow. Represents jammed conditions. Backups form locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow. | > 80 | > 50 |

Source: Highway Capacity Manual 2010, Transportation Research Board, 2010.
Note: If the volume-to-capacity (v/c) ratio exceeds 1.0, LOS F is assigned an individual lane group for all unsignalized intersections, or minor street approach at two-way stop-controlled intersections. Overall intersection LOS is determined solely by control delay.

## Average Daily Traffic Volumes/Roadway Capacity




Average Daily Trips (ADT) is the total number of vehicles that travel a defined segment of roadway over a twenty-four-hour period. ADT is a useful benchmark number for determining various roadway configurations and design aspects. The peak hour ADT, which is the highest volume of traffic to pass over a segment of roadway during a one-hour period, is also a useful means of determining a roadway's capacity and level-of-service. Traffic counts at intersections can provide an even more detailed picture of existing and future operating conditions at these locations. Roadways are generally classified in a hierarchical manner, according to the number of vehicle travel lanes provided but also by the other facilities and capacities they provide. Table CM-3, below, lists the various roadway types/cross-sections found in the planning area and the maximum daily traffic volumes each type of roadway can carry at various levels-of-service.

For example, for a Major Highway to operate at LOS C, it should accommodate no more than 24,000 vehicles per day. These roadway capacities are "rule-of-thumb" estimates, and actual capacities may vary depending on specific factors, such as the number of travel lanes, number and configurations of intersections, number of mid-block access drives, roadway grades, sight distances, percentage of truck and bus traffic, accommodation of other travel modes (pedestrians, bikes, LSEVs) and degree of access control.

**Table CM-3**
**Level-of-Service Volumes/Capacity Values**
**For Various Roadway Classifications**

| Classification | Typical Lane Configuration | Average Daily Volume @ Upper Limit of Each LOS (Veh.s/Day)[a] Ac (60%) | Bc (70%) | Cb (80%) | Dc (90%) | Eb (100%) |
|---|---|---|---|---|---|---|
| Collector | 2-Lane Undivided | 6,000 | 9,000 | 12,000 | 15,000 | 18,000 |
| Secondary Highway | 4-Lane Undivided | 10,000 | 15,000 | 20,000 | 25,000 | 30,000 |
| Major Highway | 4-Lane Divided | 10,000 | 17,000 | 24,000 | 31,000 | 38,000 |
| Arterial Highway | 6-Lane Divided | 17,000 | 27,500 | 38,000 | 48,500 | 59,000 |
| Freeway | 8-Lane Divided | 74,000 | 103,000 | 132,000 | 161,000 | 190,000 |

a. The upper limit of LOS D was assumed as the "design" capacity for Cathedral City. All capacities are based upon improvements to full City standards under optimum operating conditions. Capacity can be significantly reduced by a high pedestrian traffic and vehicle turning movements. Substandard vertical and horizontal alignment or any combination which might restrict sight distance will also reduce capacity.

## Climate Change and Transportation

California has taken the lead in aggressively addressing the causes of climate change, including and especially those associated with transportation, which is a significant source of GHGs; in California, transportation is the largest source of emissions. According to the California Air Resources Board (CARB), about 37% of the state's GHG emissions come just from vehicle tailpipes, compared to 28% nationally. Considering life-cycle emissions (extraction, fuel refining and transport, roadway construction, etc.) in addition to tailpipe emissions, transportation is the source of over half of California's GHG emissions.

The Circulation and Mobility Element provides measures for reducing motor vehicle travel and other sources of transportation GHG emissions that are critical to meeting our City's and State's GHG reduction goals. Also see the City's *Climate Action Plan*, *Energy Action Plan* and *Sustainability Plan*. Strategies to reduce transportation-related GHG emissions fall into three general categories: vehicle efficiency, switching to low- and zero-carbon energy sources, and reduction of vehicle miles traveled. The General Plan's most important policy levers focus on vehicle miles traveled (VMT) and their reduction by creating low-VMT land use patterns (mixed-use, for instance) and specifying transportation network characteristics and travel demand management strategies. Further, policies and programs are set forth to help the City prepare for Zero-Emission Vehicles (ZEV), e.g. by encouraging provision of alternative fuel and low-speed electric vehicles (LSEV) charging stations.

## Vehicle Miles Traveled (VMT): A New Metric

The State has adopted a new metric for measuring the effectiveness of transportation and land use planning, and their regulation to reduce VMTs. The goal of this effort is a reduction in motor vehicle miles traveled, which will result in a reduction in GHG emissions. The focus on VMTs is intended to reduce and shorten vehicular trips, and encourage land development that supports non-motorized modes of travel, including walking, biking and LSEVs. Building housing near jobs/services/schools, expanding transportation options, and creating local jobs increases the use of the multi-modal transportation system and can reduce VMTs. When affordable housing is not available near jobs, people may have to commute long distances and generate higher VMTs, and air pollutants and GHG emissions.

Denser development can increase the effectiveness of these land use relationships, while reducing travel time and air pollutants, travel costs and the GHG emissions responsible for accelerating climate change. Reducing parking requirements, encouraging mixed-use development, and implementing innovative ownership strategies and higher residential densities can contribute to more efficient development patterns. Active transportation options, including biking and walking, allow for less time spent in vehicles. In addition, greater individual activity also improves health, helps reduce VMTs and greenhouse gas (GHG) emissions, and improve air quality. The City has developed an *Active Transportation Plan* (ATP) and design guidelines that are an extension of this element and complement other General Plan policies serving to reduce VMTs.

The traffic analysis conducted for the 2040 General Plan update calculated future average daily VMTs for both the previous Plan and the 2040 update, indicating that the buildout of the 2040 Plan will result in a modest (90,000± miles per day) decrease in total daily VMTs when compared to the previous Plan. The decrease in average daily VMTs for the 2040 General Plan is due to a reduction in trip generation, combined with a shift in the relationship between residential and non-residential uses. This translates to a per capita and per trip VMT reduction of approximately one half of one percent.

## ENVIRONMENTAL JUSTICE

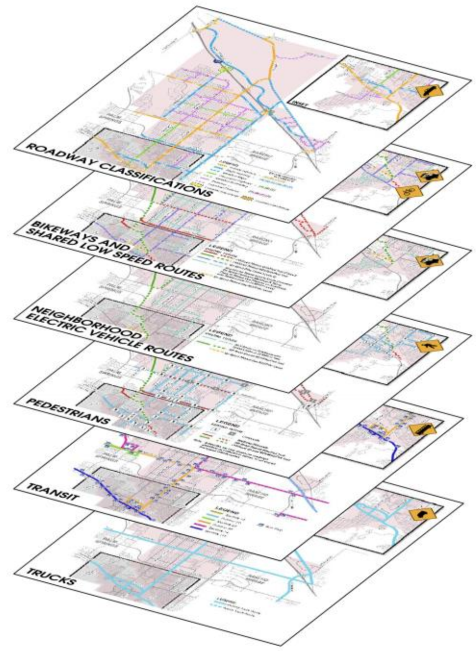
Responding to and promoting environmental justice, the Circulation and Mobility Element includes policies and programs that prioritize improvements and programs that address the needs of the more disadvantaged portions of the community, including the elderly. The General Plan and this element incorporate strategies to improve access to affordable transportation and thereby to jobs and other economic opportunities, education, arts and culture, and commercial and professional services. The General Plan and the *Active Transportation Plan* promote affordable alternatives to the personal motor vehicle, including improving the walkability of the community, expanding the availability of bike lanes and paths, and dedicating and expanding facilities for LSEVs. Discussed above, an important component of an affordable transportation network in the City is bus transit, including expanded routes, reduced headways, and increased numbers of bus stops with climate-responsive bus shelters. Enhancing bus transit is further discussed below.

## CATHEDRAL CITY TRAFFIC MODEL

The City traffic model is unique and specific to the existing and future City transportation network. It also is context-sensitive and takes into account the surrounding communities and their portions of the regional roadways that enter and leave the City. The traffic on Cathedral City streets comes from every household, every business, every public and quasi-public institution, every service and all the activities associated with them. Traffic on City roads also comes from neighboring communities. Therefore, in order to properly account for local and regional traffic the model is a focused and tailored version of the regional transportation model. To model existing and future traffic conditions a variety of socio-economic data for the City and the Coachella Valley are set forth in the local (City) version of the Riverside County Transportation Model (RivTAM). The RivTAM model and the various land use assignments in the City serve as the basis for modeling local traffic.

Modern roadway networks are designed and analyzed using sophisticated computer models but in truth the transportation network is a very diverse, complex and highly variable system. Data is infrequently and narrowly collected along major roadway segments and at important intersections. These data are supplemented by data collected for the General Plan update in 2017 and 2018. Therefore, the General Plan traffic modeling is a useful tool for predicting future traffic volumes, but there is substantial potential to affect future trip reduction and enhanced mobility beyond the predictions of the traffic model. A detailed description of the Cathedral City Model is provided in the General Plan EIR and technical appendices and is summarized below.

The Cathedral City model forecasts future traffic using Geographic Information System (GIS) mapping, a variety of socio-economic data for the City and the region, enhanced roadway network editing and travel demand modeling based on land use and other data. The City traffic model consists of a traditional four-step modeling process including (1) trip generation, (2) trip distribution, (3) mode split (choice), and (4) traffic assignment.




At the City level, the traffic modeling process begins with defining the traffic analysis zones (TAZ) and the roadway network, establishing efficient/logical traffic routes, collecting land use and socio-economic data on each TAZ, calculating trip generation in each TAZ, distributing traffic and its assignment to individual road segments. The regional traffic model divides the General Plan planning area into 42 TAZs following RivTAM zone boundaries, General Plan land use boundaries, street centerlines and other GIS data boundaries, thereby greatly increasing the detail of the analysis.

Traffic volumes are then loaded onto the roadway network, and the model approximates how actual traffic enters and travels through the local roadway system. A variety of roadway characteristics are then considered, including the type of roadway, free-flow speeds, and hourly travel per lane. The projected volume of traffic from buildout of the General Plan and growth in other areas of the valley are factored into the model. These volumes are then distributed by the model based on the origins and destinations of each trip. From this information the design requirements to maintain acceptable traffic flows are determined. Two model scenarios were included in the Cathedral City Model, the base year 2018 and the forecast year 2040.

### Trip Generation and Modal Split

Vehicle trips generated within each TAZ of the modeling area are based on land use data as designated by existing land uses and the General Plan Land Use Element. The total number of vehicle trips produced in or attracted to a geographic area is directly related to the land use and demographic variables found in each TAZ. The model estimates the number of autos and trucks using the roadway (modal split).

### Trip Distribution and Traffic Assignment

Traffic has origins (home, for instance) and destinations (work, shopping, etc.). The distribution and assignment of trips involves providing a general directional distribution of these trips and then assigning the trips to specific streets. Trip distribution is based on the formula that the distribution is proportional to the "attractiveness" of the land use (school or shopping center, for instance) and the distance (or travel time) from the point of trip production or origin. The resulting forecasts of daily traffic volumes yield the aggregate assignment of trips to roadways between and connecting TAZs throughout the City, and take into account trips passing through the City.

### Transportation System Management

Transportation System Management (TSM) is an essential part of the Circulation and Mobility Element. According to the Federal Highway Administration (FHWA), about 5 percent of urban and suburban roadway congestion is due to poor traffic signal timing. The costs associated with optimizing signals are moderate but it takes dedicated staff time to analyze traffic patterns and develop an optimal timing scheme. TSM improves the efficiency of the existing transportation system by better using these facilities and by shifting user demand to times of day when volumes are lower. It identifies improvements that enhance the operational capacity of the existing system that will improve traffic flow and air quality, reduced GHG emissions, and more efficiently move vehicles and goods throughout the City.

The costs of implementing TSM strategies are relatively low, but are a highly efficiency way of improving roadway operations. They include intersection and signal improvements, vehicle detector upgrades, optimized signal timing, systems monitoring and responsive management, turning and slip lanes, restriping for bikes and LSEVs, traffic calming, and effective signage and lighting. TSM includes the ability to monitor, in real time, the traffic and travel conditions on major roadways and to share that information with drivers and system managers to improve the operation of the roadway system. TSM components enhance system accessibility and safety.

To achieve the highest degree of TSM success possible, the City's planning and implementation of TSM should be coordinated with adjoining cities, the County and CVAG. SunLine Transit Agency, developers, and employers should also be consulted on an on-going basis. TSM should correlate land use and circulation elements to assure that planned street and highway capacities will adequately accommodate traffic generated by planned land uses. TSM programs that promote flexible hours at places of employment may improve the levels of service for area streets and highways by reducing peak hour traffic. The City's Community Design, Air Quality and Climate Stability, and Open Space and Conservation Elements include clean air and energy conservation policies, which may be implemented through TSM programs to reduce and shorten motor vehicle trips, expand use of alternative travel modes, and reduce air pollution, GHG emissions and energy use.

## CATHEDRAL CITY COMPLETE STREETS

The *Complete Streets* movement is a counter-revolution and reaction to the overwhelming dominance of the motor vehicle and its own revolution more than a century ago. The intent is to make public streets and other parts of the transportation network accessible to the full range of users, including bus transit, pedestrians, bicyclists and low-speed electric vehicles. To this end, Assembly Bill 1358 was signed into law in 2008 and cites as its purpose:

> *"In order to fulfill the commitment to reduce greenhouse gas emissions, make the most efficient use of urban land and transportation infrastructure, and improve public health by encouraging physical activity, transportation planners must find innovative ways to reduce vehicle miles traveled (VMT) and to shift from short trips in the automobile to biking, walking and use of public transit."*

AB 1358 is codified in Government Code Section 65302(b)(2)(A) and subsection (B) and requires jurisdictions to substantially revise their Circulation Element to achieve a balanced, multimodal transportation network that provides a variety of safe and convenient travel options that are suitable for and appropriate to the local context of the General Plan planning area. The goal is roads and other facilities that provide safe mobility for all travelers, not just motor vehicles; this is at the heart of complete streets. The act also states that the Circulation and Mobility Element shall:

> *"P[p]lan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, (defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation) for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan".*

### Complete Streets Design

*Complete Streets* is at the heart of the City's *Active Transportation Plan* (2019), and an integral part of this Element. As noted above, complete streets include sidewalks, bicycle lanes (or wide, paved shoulders), shared-use paths, designated bus lanes, safe and accessible transit stops, and frequent and safe crossings for pedestrians, including median refuge islands, accessible pedestrian signals, and curb extensions. In low-density neighborhoods, the complete street design may look quite different from one in a more intense urban or suburban area. A complete street in a rural area may provide wider shoulders or a separate multiuse path instead of sidewalks, while a complete street in a more urban/suburban area such as the East Palm Canyon Drive, Date Palm Drive or Perez Road corridors, may be customized to accommodate more destination-oriented needs and expectations of urban travelers.

Within the City's suburban or urban areas, street design will strive to accommodate pedestrian, bicycle and NEV travel with the inclusion of sidewalks, bicycle lanes, combined bike/NEV lanes, and dedicated off-street paths. An essential component of *Complete Streets* design is controlled street crossings that maximize multi-modal access while minimizing vehicular delay. Where there are greater distances between destinations, benches, covered resting areas, and other facilities should be provided that allow for people to successfully walk or ride a bicycle to frequently visited destinations. For more information, also see the City *Active Transportation Plan*.

### Complete Streets and Existing Roads

As the internal combustion engine replaced the horse and buggy, so today are a variety of electric vehicles and a wide range of other travel modes replacing fossil-fueled motor vehicles. Even zero-emission buses are on the roadway running on fuel-cell technology that generates electricity without fuel combustion. Since the golden age of highway construction starting after World War II, roadway networks have evolved in a manner largely incremental with rapid urban development to the essentially exclusive service of motor vehicles.

The lands in the City and valley have been divided by historic land surveys, grants and assignments and allotments to Native American Tribes, and the Southern Pacific/Santa Fe Railroad (today's Union Pacific Railroad rights-of-way). Over the years, cities have formed and established their own standards sometimes resulting in inconsistent road rights-of-way and substantial variability in existing and potential future roadway improvements. The element provides reasonable flexibility to address these special conditions.

The Circulation and Mobility Element provides a comprehensive set of roadway classifications that address all existing and future City roads, maximize the integration of multi-modal facilities and enhance safety on the roadway network. The element and *Complete Streets* design principles also allow flexible and adaptive management to blend and harmonize various nuances in design and assure a responsive and well-balanced multimodal transportation network.

### Funding Complete Streets

The City will strive to take advantage of all available potential sources of *Complete Streets* funding, as well as revenue sources for on-going maintenance and upkeep. Federal, state and local transportation funding focuses on economic competitiveness, livability, state of repair, and environmental benefits. The federal government, including the Federal Highway Administration (FHWA) and Environmental Protection Agency (EPA), is expected to continue to be a source of funding for a *Complete Streets* program. Other sources are expected to include individual new project improvements, state funds, local Measure A funds, Developer Impact Fees (DIFs) and even bonding financing.

### Complete Streets: Return on Investment

According to *Complete Streets.org*, Americans spend 18 cents of every dollar on transportation. The poorest fifth of families spend more than double that figure. Complete Streets give people more control over their expenses, replacing expensive car travel with cheaper options like walking, riding bikes, and taking public transportation. In most urban areas studied, every one-point increase in the 100-point Walk Score scale is associated with an increase in home value of $500 - $3,000. And residents of walkable communities are more likely to be socially engaged and trusting, and report being in good health and happy more often.

## ACTIVE TRANSPORTATION PLAN

Concurrent with the 2040 update to the General Plan, a City-focused active transportation plan (ATP) was developed to evaluate the potential for expanded multi-modal facilities. The ATP is by reference a part of the General Plan. The City ATP has been developed to complement the General Plan Circulation and Mobility Element by providing a broader range of transportation alternatives. A multi-layered network of bike, pedestrian, and low speed electric vehicle routes has been developed that increase diversity and choice, and efficiency and convenience, while preserving accessibility for automobile travelers.

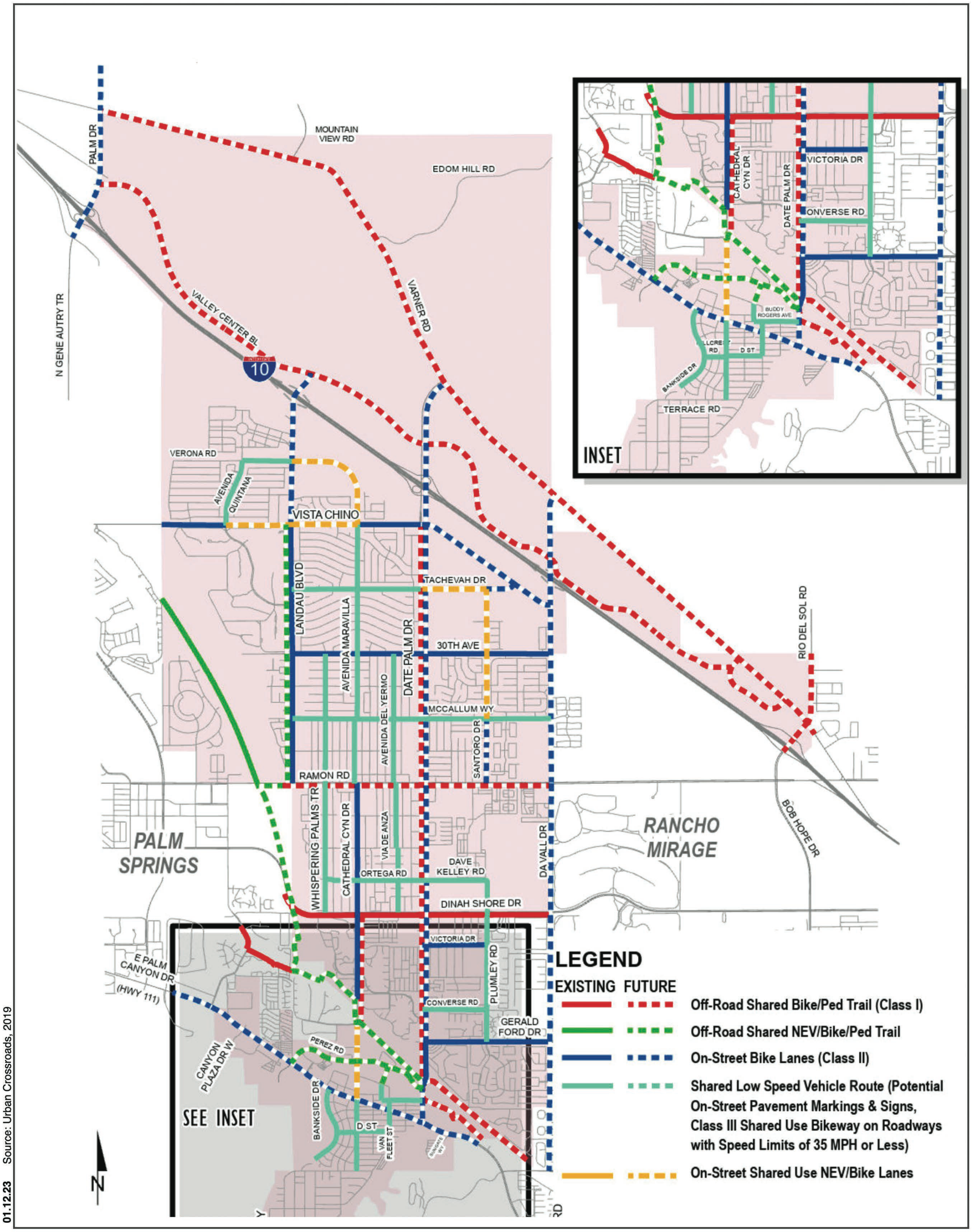



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**Exhibit CM-2 - Existing and Future Multi-Modal Facilities**
**Cathedral City 2040 General Plan**

Cathedral City

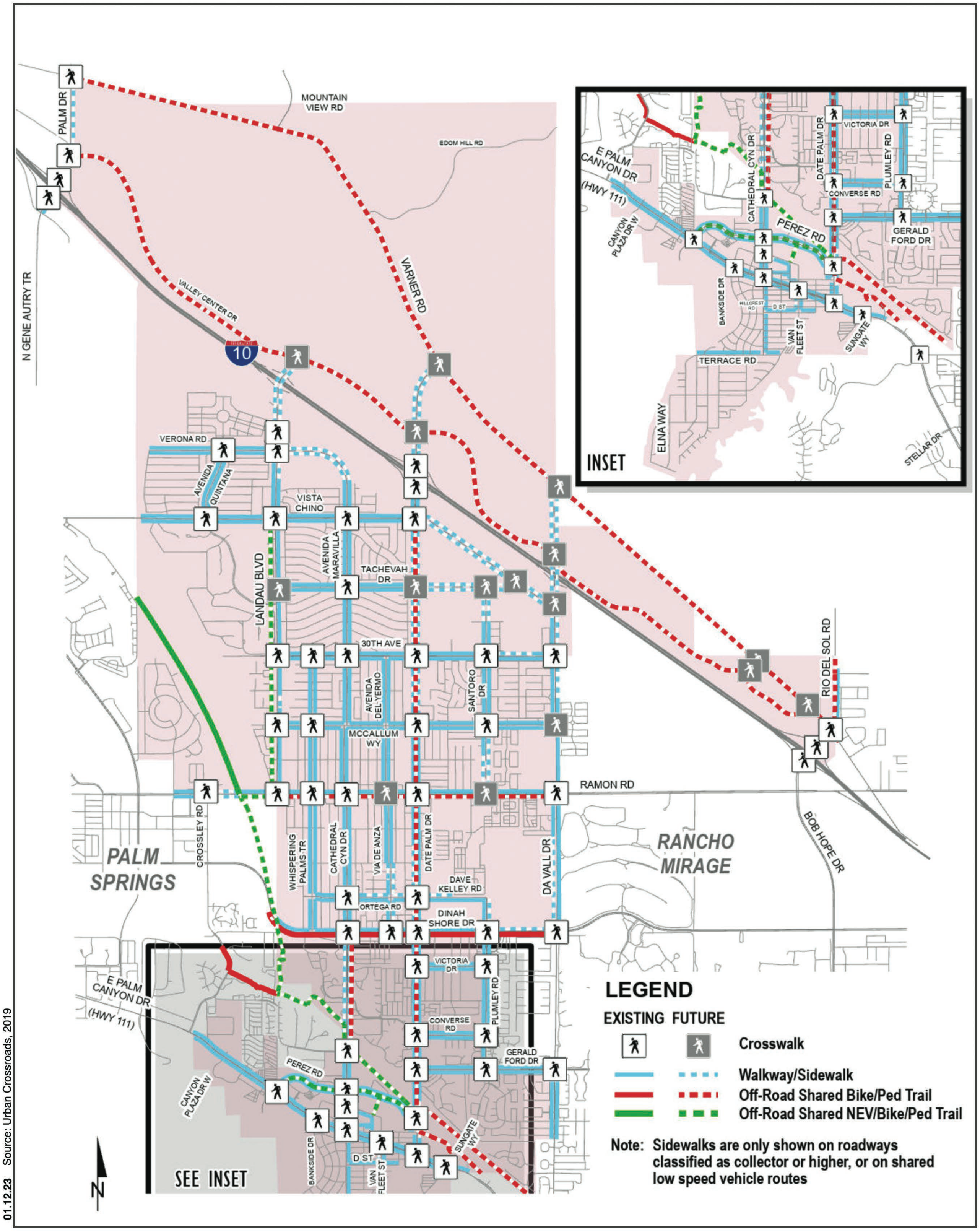


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**Exhibit CM-3 - Existing and Future Pedestrian Facilities**
**Cathedral City 2040 General Plan**

Cathedral City

"Active transportation" refers to human powered transportation and also to low-speed electric-assist devices. The ATP generically refers to active transportation trips as pedestrian, bicycle and LSEV trips, since these represent the majority of active transportation trips. The Circulation and Mobility Element and the ATP envision a progressively expanding network of sidewalks, bikeways, and LSEV paths that provide active alternatives to using a car. By planning for and making thoughtful and strategic investments in ATP facilities and improvements, the evolving multi-modal network will help to reduce emission of air pollutants and GHGs, reduce roadway congestion and improve overall community character. Effective linkages within the multi-modal network will reduce the number and average length of motor vehicle miles travelled.

The City Active Transportation Plan identifies the multi-layer transportation network, discusses their respective roles in personal mobility and provides a framework for a cohesive and comprehensive local transportation system. The ATP also addresses legislative requirements, provides a basis for securing future strategic transportation investment and ensures a vibrant community through active mobility options. The Circulation and Mobility Element and ATP help serve to balance infrastructure needs with limited available resources. In this regard, the multi-layered ATP will allow the City to access and more effectively compete for various local, state and federal funding sources.

This element and the ATP also emphasize the City's goal of diversifying the local transportation network and making it as safe and easy as possible to walk, bike or use a LSEV instead of a motor vehicle. The broadened menu of roadway classifications and their assignment to the specific streets set forth in this element makes explicit provision for these multi-modal facilities as an essential part of the City's transportation network. Please see Exhibits CM-2 and CM-3 above, showing existing and planned multi-modal facilities. Additional detail on these facilities can be found in the Cathedral City *Active Transportation Plan*.

### Multi-Modal Lanes and Paths

Multi-modal lanes and paths can provide convenient pedestrian, bicycle and LSEV user-connections between neighborhoods, schools, parks and dog parks, shopping, restaurants and other activity centers. They are designed to support a good mix of cyclists, walkers, joggers and low-speed electric vehicles. CV Link is a backbone component of the City's multi-modal path system. In addition to accessibility, multi-modal pathways provide opportunities for economic benefit and growth by providing pedestrian, bicycle and LSEV access to restaurants and other businesses, without the need for additional auto parking and traffic congestion. In addition, these paths increase property values and tourism and recreation-related spending on items such as bicycles, in-line skates and lodging. As noted above, property values are also positively affected in communities with a well-developed multi-use path network that enhances health and recreation benefits. According to a 2017 National Association of Realtors survey of a socio-economic cross section of prospective homebuyers, they want to be able to walk to shopping, parks and other community amenities, and use sidewalks and paths in general for walking and jogging.

## INNOVATIVE TRANSPORTATION DESIGN

In conjunction with the drive for greater multi-modal access to the City's transportation network, a variety of design innovations have emerged and re-emerged as the needs of the traveling public have changed. These include dedicated bike lanes, restricted access, roundabouts, slip-lanes, and other design features that increase efficiency and safety.

Roundabouts have evolved into smooth-flowing, high capacity roadway systems and are an ideal solution for many types of intersections. In addition to streets, multi-modal paths have been developed along stormwater channels, areas of public open space, and networks of community bike paths, including CV Link. These facilities are being woven together to provide area-wide access. Diversifying the City transportation network with multi-modal facilities provides enhanced mobility and quality of life for residents and visitors.

## Roundabouts

One of the first American roundabouts (sometimes called a rotary) was constructed in San Jose, California in 1907 but historically they were to be found largely in Europe, especially France and England in the 17th and 18th century. In the past three decades roundabouts have made significant in-roads into roadway networks in the United States. While the City has only one roundabout (2019) in the Rio Vista development, their use has real advantages that may be applicable to some existing and future City intersections.

The driving rules in the US, including driving on the right side of the street, drive the design of roundabouts. Therefore, vehicles traveling on the modern roundabout in this country do so in a counterclockwise direction and usually around a raised center island. Traffic entering the roundabout yields to traffic already circulating within it and may be directed to an inside or outside lane depending on how far around one needs to travel before exiting the roundabout.

Roundabout speeds are relatively low (15 to 25 mph); however, traffic never stops, so there is a lot of capacity in this type of intersection design if properly used. Another advantage of roundabouts is the general avoidance of having to stop traffic for other vehicular traffic.

The Federal Highway Administration (FHWA) finds that roundabouts are generally safer than signalized intersections for several reasons. Traffic in modern roundabouts travel at lower speeds when entering and exiting. They have fewer conflicting points than do conventional intersections, and right-angle and head-on crashes are eliminated. A four-leg (one feeder lane in each direction) roundabout has about 75% fewer conflict points compared to STOP-controlled intersections. They can also be effective as a traffic-calming device in areas with low vehicle volumes and higher numbers of pedestrians and bikers, where they may in some cases also have four-way stop controls. Generally, pedestrian and bicyclist safety is increased in a roundabout; for instance, pedestrians only need to look in one direction at a time at each approach.

Constructing a roundabout will typically exceed the cost of a signalized intersection, but the annual savings in electricity and operations and maintenance results in a payback within five to seven years. Additional long-term savings is realized as long as the roundabout is in service. They also contribute to a decrease in pollutant emissions and GHGs with little or no stop-and-go traffic, efficient operating speeds and shortened travel time.

## All-Weather Access

The Coachella Valley and several portions of the City are prone to flooding during major rain events. A significant investment has already been made in the City on bridges and other all-weather construction primarily along and across the Whitewater River Stormwater Channel and the East and West Cathedral Canyon Channels. The Whitewater River is the principal drainage affecting all-weather access in the City. In the northern portions of the City, lands south of the Union Pacific Railroad lines and north of US Interstate-10 are affected by only partially managed storm flows emanating from Morongo Canyon and Long Canyon drainages. Also see the *Flooding and Hydrology Sub-Element* of the *Safety Element*.

All-weather access and roadway capacity are also affected by local stormwater runoff, which is frequently conveyed by local streets into dedicated surface and sub-surface stormwater facilities. Areas of inadequate drainage can result in on-road ponding, unsafe conditions, and reduced accessibility and capacity.

### Preserving Roadway Capacity

One of the most-costly public expenses is the construction and maintenance of City roadways. Rights-of-way for roads also create a substantial demand for limited land and can have adverse impacts on adjoining property. Therefore, roadway design, operation and maintenance must be as cost-effective as possible. Along major arterial roadways, such as East Palm Canyon Drive, Date Palm Drive, Cathedral Canyon Drive, Ramon Road, Vista Chino and other major roadways, access from adjoining properties should be controlled and limited. In more densely developed areas, limited access and median islands will also improve roadway operation for vehicles and pedestrians.

### Securing Right of Way

Roadway standards have evolved over the years and are in yet another period of transition brought about by an increased emphasis on multi-modal transportation. The need for six-lane divided roadways in some of our neighborhoods was not imagined decades ago, nor were they provided for everywhere they should have been. As a result, there are network capacity constraints and bottle necks that community traffic contends with every day. Nonetheless, the City has generally been able to secure right-of-way adequate to provide full-width segment roadway improvements. The City may be able to secure additional right-of-way along major arterials designated as *Image Corridors*, described below. The need for expanded intersection improvements in some areas may require additional on-street lanes and new and upgraded multi-modal parkway facilities. The greatest demand for additional right-of-way may be at future critical intersections, where dual left turn lanes and dedicated right turn lanes would be needed. Please see the Table CM-7 below and the General Plan Program EIR regarding future intersection design requirements.

### Roadway Access and On-Site Parking

Beyond basic capacity, the City's roadway network can also be affected by the design and location of access drives and on-site parking. Access onto major roadways, especially from such high-volume land uses as commercial centers, creates "friction " and slows the flow of traffic. In addition to providing safe access, businesses must provide safe and efficient parking to serve customers. Some of the City's existing developments are limited in their ability to provide sufficient off-street parking. Conversely, large commercial developments have in some cases been designed to accommodate parking needs during peak season, resulting in large expanses of vacant parking during much of the year.

New development and lands undergoing redevelopment should be required to provide on-site parking adequate to meet regular demand, without providing excessive parking and associated expanses of asphalt. Parking lot ingress and egress must also be thoughtfully controlled and consolidation encouraged to minimize disruption to traffic flow and facilitate the preservation of roadway capacity, while assuring safety. Enhanced access for pedestrians, bicyclists and LSEVs should also be addressed within and along streets and sidewalks surrounding developments. While the types and mix of vehicles may change, the need for roadway capacity will not.

Wherever possible, adjoining development should be encouraged to integrate and share access drives and implement reciprocal parking design and management as a means of better matching parking availability with varying parking demand.

### Roadway Image Corridors

The City takes its name from the "cathedral of stone" that is the Santa Rosa Mountains. Most visitors and residents enjoy the City's most magnificent views from the City's streets and highways. Our scenic mountain and desert landscape provide some of the most beautiful views in the western Coachella Valley and add significantly to the quality of life the community has to offer. The Cathedral City viewsheds give the City its sense of place, from the intimate to the grand and panoramic.

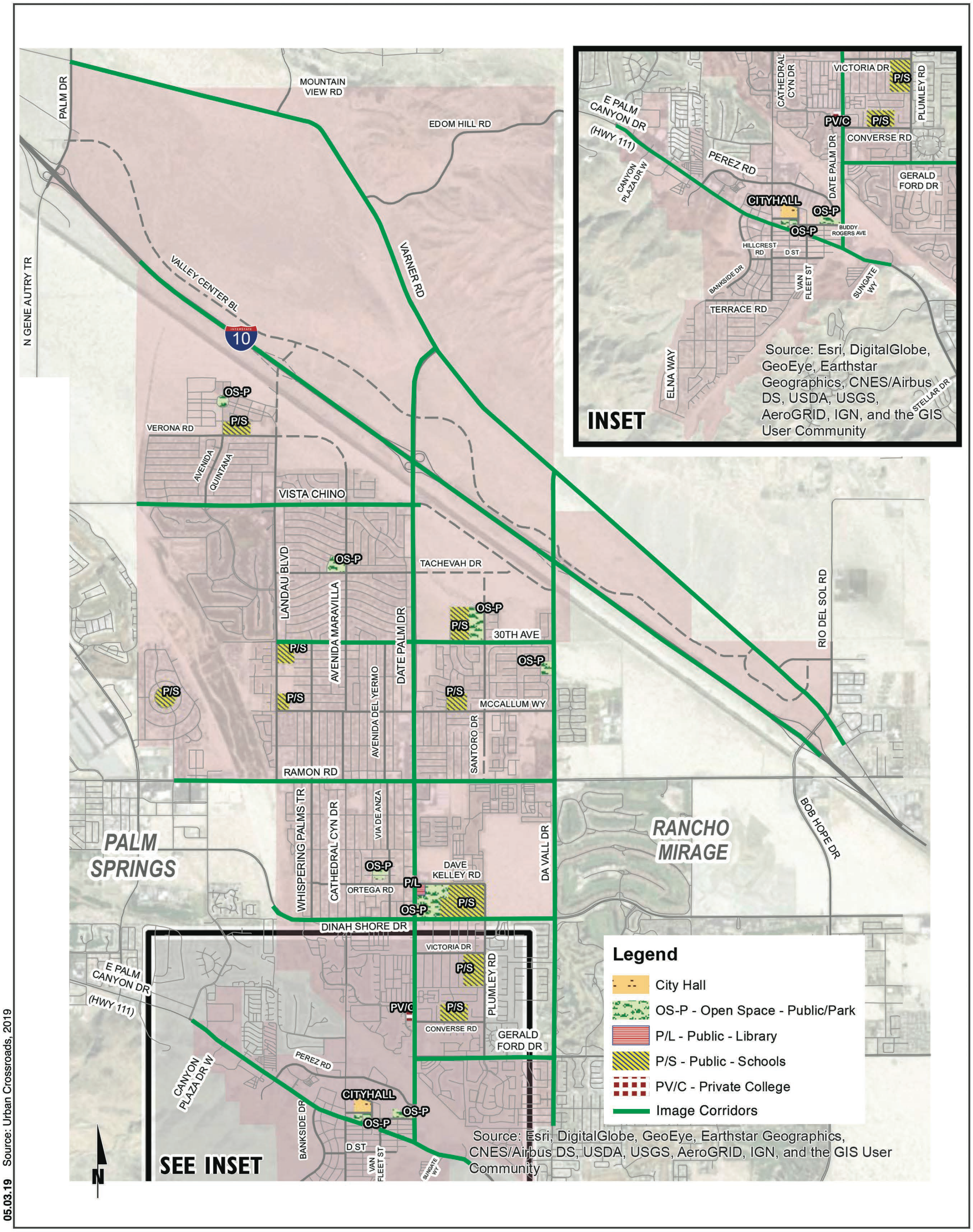


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**Exhibit CM-4 - Image Corridors**
**Cathedral City 2040 General Plan**

Cathedral City

The City's scenic resources are varied and diverse, and include the Cathedral Cove nestled in the foothills and the expansive backdrop of the Santa Rosa Mountains. The valley floor and the rising terrain of Edom Hill and the Indio Hills provide another, different landscape that impresses in its own way. And the rising terrain of the San Jacinto, San Bernardino and Little San Bernardino Mountains add to our unique desert panorama. The City's scenic resources also include varied streetscapes and parks and open space. Protection of these resources is important to preserving the City's scenic corridors and unique quality of life.

The City's scenic image corridors are subject to a variety of threats, including inappropriate and unattractive land uses, unattractive or inadequate landscaping, inadequately buffered parking lots, excessive or inappropriate signage, high walls and berms that block views, and overhead power lines.

Protecting and enhancing these scenic corridors is furthered by securing parkway easements along major roadways, resulting in greater building setbacks and enhanced parkway landscaping. Enhanced parkways better assure viewshed protection and also provide more room for alternative modes of travel. Parkway easements along image corridors help assure that the traveling public (and adjoining property owners) share in a quality landscaped parkway experience that enhances the image of these scenic corridors. Important image corridors and key locations where community gateway treatments enhance the local and city-wide sense of place, are shown on Exhibit CM-4 above.

## CURRENT ROADWAY CONDITIONS

Cathedral City and the other communities of the Coachella Valley located primarily south of US Interstate-10 have grown into an area of continuous urban development, tied together by state and interstate highways and a network of arterial roadways. The Mid-Valley Parkway (Dinah Shore Drive) is an additional intra-regional arterial that extends from the Palm Springs International Airport entrance on Ramon Road, southeast to Frank Sinatra Drive in Palm Desert. Each of these regional facilities is briefly described below. A variety of physical influences and constraints have impacted development on local roadways, including the geography of the City and valley, major drainages, the constrained development pattern between U.S. Interstate-10 and the Santa Rosa Mountains, and the existing roadway network. The regional and City roadway network is further described in the General Plan EIR and its technical appendices.

### Major Regional Roadways

Two regional routes provide primary access to the City: East Palm Canyon Drive (State Highway 111) and US Interstate-10. Interstate-10 connects the Los Angeles region with Arizona and other cities and states to the east. East Palm Canyon Drive is designated as State Highway 111 at its junction with Interstate-10 several miles west of Palm Springs. As it enters Palm Springs, Highway 111 proceeds east along Vista Chino, then south along Gene Autry Trail, where it intersects and becomes East Palm Canyon Drive and proceeds east through Cathedral City. East of Cathedral City, East Palm Canyon Drive is once again designated as "Highway 111," and it continues southeast to Brawley in the Imperial Valley.

<u>U.S. Interstate-10</u>

I-10 provides essential inter-city and inter-regional access and is a critical part of the local road network, moving people and goods into and out of the Valley. Where it passes through Cathedral City, U.S. Interstate-10 is built as an eight-lane divided freeway, which is accessed from a diamond-shaped interchange at Bob Hope Drive, a cloverleaf interchanges at Date Palm Drive and a modified cloverleaf/diamond interchange at Palm Drive. The General Plan also reflects the long-established plans for a future interchange at the northerly extension of Da Vall Drive, approximately one mile east of the I-10/Date Palm Drive interchange. An I-10 interchange with Landau Boulevard (extended) is also planned.

East Palm Canyon Drive

East Palm Canyon Drive follows the approximate route of the Old Bradshaw Trail (see the Cultural Resources Sub-Element), which runs along the toe of the Santa Rosa Mountains and the Whitewater River. This roadway again becomes the state-classified Highway 111 at the City's easterly boundary with Rancho Mirage. Its classification notwithstanding, East Palm Canyon Drive is an important intra-regional connector serving local cities. Over the past several years, some through-traffic appears to have moved north to Dinah Shore Drive and I-10 in response to congestion along this roadway.

East Palm Canyon Drive is an integral part of the Cathedral City Downtown planning area and has been designed to improve traffic flow while providing enhanced access to the adjoining commercial and institutional land uses. Improvements vary from four to six travel lanes between the City's east and west boundary, with the western portion west of Canyon Plaza Drive being a divided four-lane roadway, with east-bound lanes expanded to three lanes east of Canyon Plaza Drive and extending to Cathedral Canyon Drive. East of Cathedral Canyon Drive this roadway becomes a four-lane divided roadway with slipstream turn pockets from Cathedral Canyon Drive eastward to Date Palm Drive. East of Date Palm Drive, East Palm Canyon provides three westbound travel lanes and two eastbound travel lanes to the City's east limits.

Dinah Shore Drive: The Mid-Valley Parkway

The Mid-Valley Parkway, now named Dinah Shore Drive, was originally conceived as an east-west, inter-city arterial that would serve as a high capacity linkage between Palm Springs and the various communities to the east, and as an alternate route to East Palm Canyon Drive/Highway 111. It was envisioned as a six-lane, high-speed, restricted access roadway located mid-way between Highway 111 and Interstate-10 and provide access to regional transportation hubs, including the Palm Springs International Airport. Unfortunately, cost constraints and problems securing adequate right-of-way in adjoining cities reduced the size of this arterial to a four-lane divided roadway. Today, the parkway follows a circuitous route in Palm Springs to Palm Desert and provides marginally better performance than other regional arterials. The Dinah Shore Drive bridge over the Whitewater River has reduced some of the traffic volume on nearby Ramon Road; however, development along much of this roadway limits its capacity through the City.

### Other Major Local Roadways

The City has constructed and maintains a variety of other major roadways of local importance, including Gerald Ford Drive, Ramon Road, Vista Chino, Date Palm Drive, Cathedral Canyon Drive, Landau Boulevard and Da Vall Drive. These roadways have been built along a compass-based grid that interconnects with major arterials passing through adjacent jurisdictions. The convenience they provide in traversing through the City is of importance to residents and businesses alike. The planned Valley Center Drive north of I-10 will provide similar arterial service through the master planned communities approved for development in this area of the City.


### Existing Roadway Traffic Conditions

A variety of traffic data was collected to evaluate existing (2018) traffic conditions in the planning area, including traffic counts from the City, CVAG and Caltrans, and traffic and intersection counts in the planning area collected for the latest General Plan update. The following table lists major roadway segments and describes existing capacities, average traffic volumes, and levels-of-service. Existing Average Daily Traffic (ADT) volumes are displayed graphically on Exhibit CM-5, and General Plan street cross-sections are illustrated on Exhibits CM-9A, 9B & 9C. ADT volumes are also shown on the following table, Table CM-4.

**Table CM-4**
**Existing Conditions Summary**
**Major Roadways in the Planning Area**

| Roadway Link | Current ADT | Daily Capacity[a.] (Veh./Day). | Ratio V/C[b.] | Level of Service |
|---|---|---|---|---|
| U.S Interstate-10 | | | | |
| – W of Indian Canyon Drive | 86,000 | 190,000 | 0.42 | A |
| – W of Palm Drive | 88,000 | 190,000 | 0.46 | B |
| – E of Date Palm Drive | 94,000 | 190,000 | 0.49 | B |
| Gene Autry Trail/Palm Drive | | | | |
| – N of Interstate-10 | 29,920 | 38,000 | 0.78 | D |
| – S of Interstate-10 | 31,782 | 46,000 | 0.85 | E |
| Mountain View Road | | | | |
| – N of Varner Road | 11,200 | 18,000 | 0.62 | C |
| Landau Boulevard | | | | |
| – N of Ramon Road | 19,070 | 38,000 | 0.50 | C |
| Cathedral Canyon Drive | | | | |
| – S of Ramon Road | 16,052 | 38,000 | 0.42 | B |
| – S of Dinah Shore Drive | 19,450 | 38,000 | 0.51 | C |
| Date Palm Drive | | | | |
| – S of Varner Road | 8,410 | 18,000 | 0.47 | B |
| – N of Vista Chino | 32,806 | 59,000 | 0.56 | C |
| – N of 30th Avenue | 27,295 | 59,000 | 0.46 | B |
| – N of Ramon Road | 27,250 | 59,000 | 0.49 | B |
| – N of Dinah Shore Drive | 28,383 | 38,000 | 0.46 | D |
| – N of Gerald Ford Drive | 25,454 | 38,000 | 0.67 | D |
| – N of East Palm Canyon Drive | 17,226 | 38,000 | 0.45 | C |
| Da Vall Drive | | | | |
| – N of Ramon Road | 8,704 | 18,000 | 0.48 | B |
| – S of Ramon Road | 8,014 | 38,000 | 0.21 | A |
| Bob Hope Drive | | | | |
| –N of U.S. I-10 | 12,983 | 38,000 | 0.34 | B |
| –N of Ramon Road | 22,023 | 38,000 | 0.58 | B |
| Varner Road | | | | |
| – E of Palm Drive | 1,900 | 18,000 | 0.11 | A |
| – E of Mountain View Road | 16,200 | 18,000 | 0.90 | E |
| – E of Date Palm Drive | 4,753 | 18,000 | 0.26 | A |
| Vista Chino | | | | |
| – W of Landau Boulevard | 26,134 | 38,000 | 0.69 | D |
| – W of Date Palm Drive | 24,370 | 38,000 | 0.64 | D |
| 30th Avenue | | | | |
| – W of Date Palm Drive | 7,663 | 18,000 | 0.42 | B |
| – E of Date Palm Drive | 9,402 | 18,000 | 0.52 | C |
| Ramon Road | | | | |
| – W of Landau Boulevard | 40,908 | 59,000 | 0.69 | D |
| – W of Cathedral Canyon Drive | 38,712 | 59,000 | 0.66 | D |
| – E of Date Palm Drive | 31,058 | 59,000 | 0.53 | C |
| – W of Bob Hope Drive | 31,064 | 59,000 | 0.53 | C |

**Table CM-4 (continued)**
**Existing Conditions Summary**
**Major Roadways in the Planning Area**

| Roadway Link | Current ADT | Daily Capacity[a.] (Veh./Day). | Ratio V/C[b.] | Level of Service |
|---|---|---|---|---|
| Dinah Shore Drive | | | | |
| – W of Cathedral Canyon Drive | 29,053 | 38,000 | 0.76 | D |
| – E of Date Palm Drive | 22,490 | 38,000 | 0.59 | C |
| – W of Bob Hope Drive | 20,800 | 38,000 | 0.55 | C |
| Gerald Ford Drive | | | | |
| – E of Date Palm Drive | 13,452 | 30,000 | 0.45 | C |
| – E of Da Vall Drive | 13,862 | 38,000 | 0.36 | B |
| Perez Road | | | | |
| – W of Cathedral Canyon Drive | 10,587 | 30,000 | 0.35 | B |
| – W of Date Palm Drive | 11,570 | 30,000 | 0.38 | B |
| East Palm Canyon Drive | | | | |
| – W of City Limits | 45,550 | 38,000 | 1.19 | F |
| – W of Cathedral Canyon Drive | 36,787 | 38,000 | 0.97 | E |
| – W of Date Palm Drive | 42,655 | 38,000 | 1.12 | F |
| – E of Sungate Way | 47,023 | 59,000 | 0.80 | D |

[a] These values represent the current “physical” capacity at the upper limit of LOS E, as shown in the table entitled “Level-of-Service Volumes/Capacity Values for Various Roadway Classifications.”
[b] These values were calculated using the “physical” capacity at the upper limit of LOS E.
Source: “Cathedral City General Plan Transportation Analysis”, Urban Crossroads, Inc. 2019

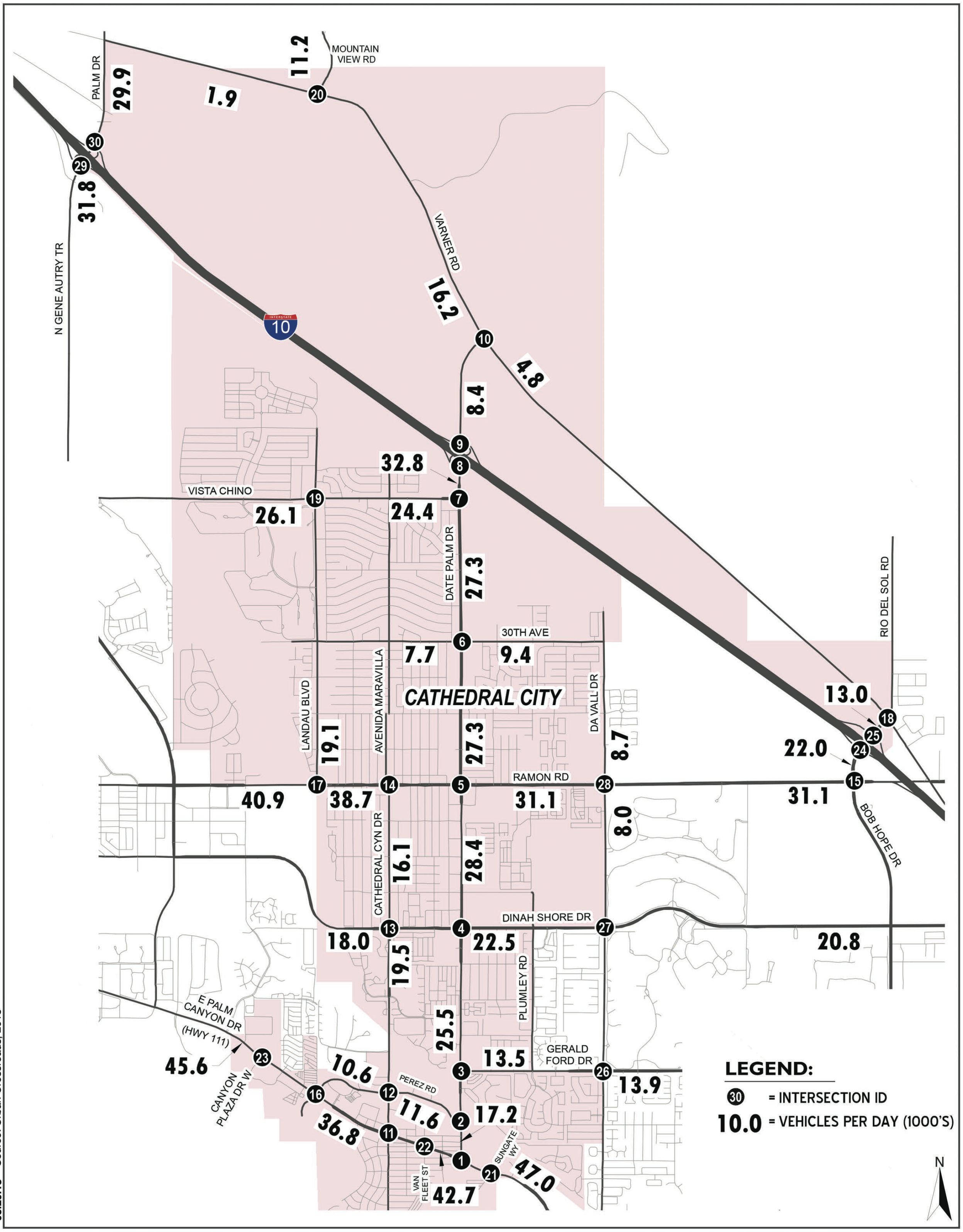


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**Exhibit CM-5 - Existing ADT Volumes**
**Cathedral City 2040 General Plan**

Cathedral City

## GENERAL PLAN BUILDOUT

### Trip Generation

The number of trips generated at buildout of the planning area is based on the land use types, acreages and intensities assigned by the General Plan Land Use Plan. The transportation model estimates the average number of peak season vehicle trips that will be produced on a weekday for each transportation analysis zone (TAZ), and gives special consideration to seasonal peak trips to address the increased travel demand that occurs when visitors and seasonal residents use the City roadway network. Based on the land use types and intensities established by the Land Use Plan, 2040 buildout of the General Plan planning area is expected to generate a total of approximately 1,052,619 daily two-way trips during peak season.

### Levels-of-Service

Buildout of the General Plan is expected to provide LOS D or better operations on a daily basis for most (81%) major roadway segments in the planning area. However, thirteen segments (15%) are expected to operate at LOS E, and four (4%) are expected to operate at LOS F. Typically, impacts to roadway links that are projected to operate at LOS E on a daily basis can be adequately mitigated by providing additional turning lanes at intersections. Where roadway links are projected to operate at LOS F, the construction of additional through lanes is usually required to adequately reduce delays or provide alternative parallel routes.

The preservation of adequate right-of-way at major intersections is critical to improving conditions on roadways projected to function at LOS E and F, in order to allow space for future intersection improvements. Areas where future impacts remain unacceptable will require more detailed and focused analysis to alleviate anticipated impacts. These areas are addressed in subsequent sections of this element.

Anticipated average daily traffic (ADT) volumes and volume-to-capacity ratios (levels-of-service (LOS)) for major roadway segments in the planning area are described in the following Table CM-5. Daily traffic volumes are illustrated graphically in Exhibit CM-5. Volume to capacity ratios that exceed 0.99 are operating at LOS F. Of course, both the following table and exhibit refer only to vehicular traffic. As discussed in the *Complete Streets* section of this element, the City is mandated to design and manage the transportation system to accommodate all users, as is illustrated in Exhibit CM-7.

**Exhibit CM-6: A Variety of Street Users**

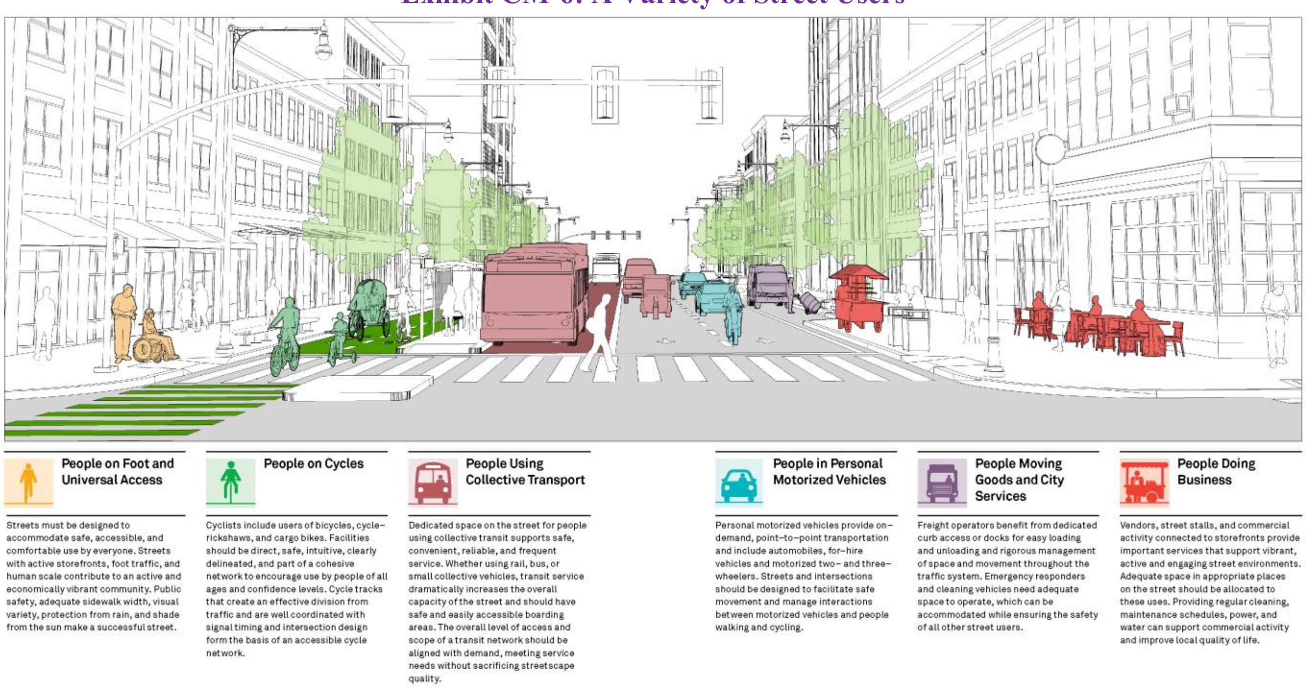

**Table CM-5**
**General Plan 2040 Buildout Traffic**
**Roadway Segment Impact Analysis**

| Roadway | Segment | Roadway Designation | Through Travel Lanes[1] | Capacity[2] | ADT[3] | Volume/ Capacity Ratio |
|---|---|---|---|---|---|---|
| Date Palm Dr. | north of Palm Canyon Dr. | Arterial (A) | 6 | 59,000 | 31,700 | 0.54 |
| | north of Gerald Ford Dr. | Arterial (A) | 6 | 59,000 | 35,700 | 0.61 |
| | north Dinah Shore Dr. | Arterial (A) | 6 | 59,000 | 33,000 | 0.56 |
| | north of Ramon Rd. | Arterial (A) | 6 | 59,000 | 31,600 | 0.54 |
| | north of 30th Av. | Arterial (A) | 6 | 59,000 | 34,000 | 0.58 |
| | north of Vista Chino | Arterial (A) | 6 | 59,000 | 47,300 | 0.80 |
| | north of I-10 WB Ramps | Arterial (A) | 6 | 59,000 | 33,000 | 0.56 |
| Cathedral Cyn. Dr. | south of Dinah Shore Dr. | Secondary (B) | 4 | 30,000 | 19,000 | 0.63 |
| | south of Ramon Rd. | Secondary (B) | 4 | 30,000 | 17,900 | 0.60 |
| Landau Blvd. | north of Ramon Rd. | Major (B) | 4 | 38,000 | 36,200 | **0.95** |
| Bob Hope Dr. | north of Ramon Rd. | Arterial (D) | 6 | 59,000 | 34,700 | 0.59 |
| DaVall Dr. | south of Ramon Rd. | Major (A) | 4 | 38,000 | 21,500 | 0.57 |
| | north of Ramon Rd. | Major (A) | 4 | 38,000 | 29,000 | 0.76 |
| East Palm Canyon Dr.-Hwy. 111 | east of Sungate Wy. | Arterial (A) | 6 | 59,000 | 57,400 | **0.97** |
| | west of Date Palm Drive | Arterial (A) | 6 | 59,000 | 46,200 | 0.78 |
| | west of Cathedral Cyn. Dr. | Arterial (A) | 6 | 59,000 | 44,500 | 0.75 |
| | west of Canyon Plaza Dr. W. | Arterial (A) | 6 | 59,000 | 46,300 | 0.78 |
| Perez Road[6] | west of Date Palm Dr. | Major (C) | 4 | 38,000 [5] | 23,300 | 0.81 |
| | west of Cathedral Cyn. Dr. | Major (C) | 4 | 38,000 [5] | 21,500 | 0.88 |
| Gerald Ford Dr. | east of Da Vall Dr. | Major (C) | 4 | 38,000 | 23,500 | 0.62 |
| | east of Date Palm Dr. | Major (C) | 4 | 38,000 | 26,600 | 0.70 |
| Dinah Shore Dr. | west of Bob Hope Dr. | Major (E) | 4 | 39,000 [4] | 32,200 | 0.83 |
| | east of Date Palm Dr. | Major (E) | 4 | 39,000 [4] | 36,100 | **0.93** |
| | west of Cathedral Cyn. Dr. | Major (E) | 4 | 39,000 [4] | 33,200 | 0.85 |
| Ramon Road | west of Bob Hope Dr. | Arterial (B) | 6 | 59,000 | 48,500 | 0.82 |
| | east of Date Palm Dr. | Arterial (B) | 6 | 59,000 | 39,600 | 0.67 |
| | west of Cathedral Cyn. Dr. | Arterial (B) | 6 | 59,000 | 41,100 | 0.70 |
| | west of Landau Bl. | Arterial (B) | 6 | 59,000 | 54,300 | **0.92** |
| 30th Ave | east of Date Palm Dr. | Collector (C) | 2 | 18,000 | 18,400 | **1.02** |
| | west of Date Palm Dr. | Collector (A) | 2 | 18,000 | 16,900 | **0.94** |
| Vista Chino | west of Date Palm Dr. | Arterial (C) | 4 | 40,000 [4] | 34,400 | 0.86 |
| | west of Landau Bl. | Arterial (C) | 4 | 40,000 [4] | 35,500 | 0.89 |
| Varner Road | east of Date Palm Dr. | Modified Major | 4 | 38,000 | 22,800 | 0.60 |
| | west of Date Palm Dr. | Arterial (B) | 6 | 59,000 | 39,700 | 0.67 |
| Bob Hope Dr. | north of I-10 WB Ramps | Arterial (D) | 6 | 59,000 | 51,700 | 0.88 |
| Gene Autry Tr. - Palm Dr. | south of I-10 EB Ramps | Arterial (A) | 6 | 59,000 | 35,000 | 0.59 |
| | north of I-10 WB Ramps | Arterial (A) | 6 | 59,000 | 33,400 | 0.57 |

1 Existing Number of Through lanes
2 LOS "E" Capacity per Cathedral City Roadway Segment Capacity LOS Thresholds
3 Average Daily Traffic (ADT) expressed in vehicles per day.
4 Estimated capacity for 4-lane Arterial capacity.
5 Estimated capacity for 2-lane Major capacity
6 Adopted GP maintains four travel lanes for Perez Road. With 4 travel lanes as currently configured, Perez Road will have a LOS E capacity of approximately 38,000 ADT with a V/C ratio of 0.81 and 0.88.

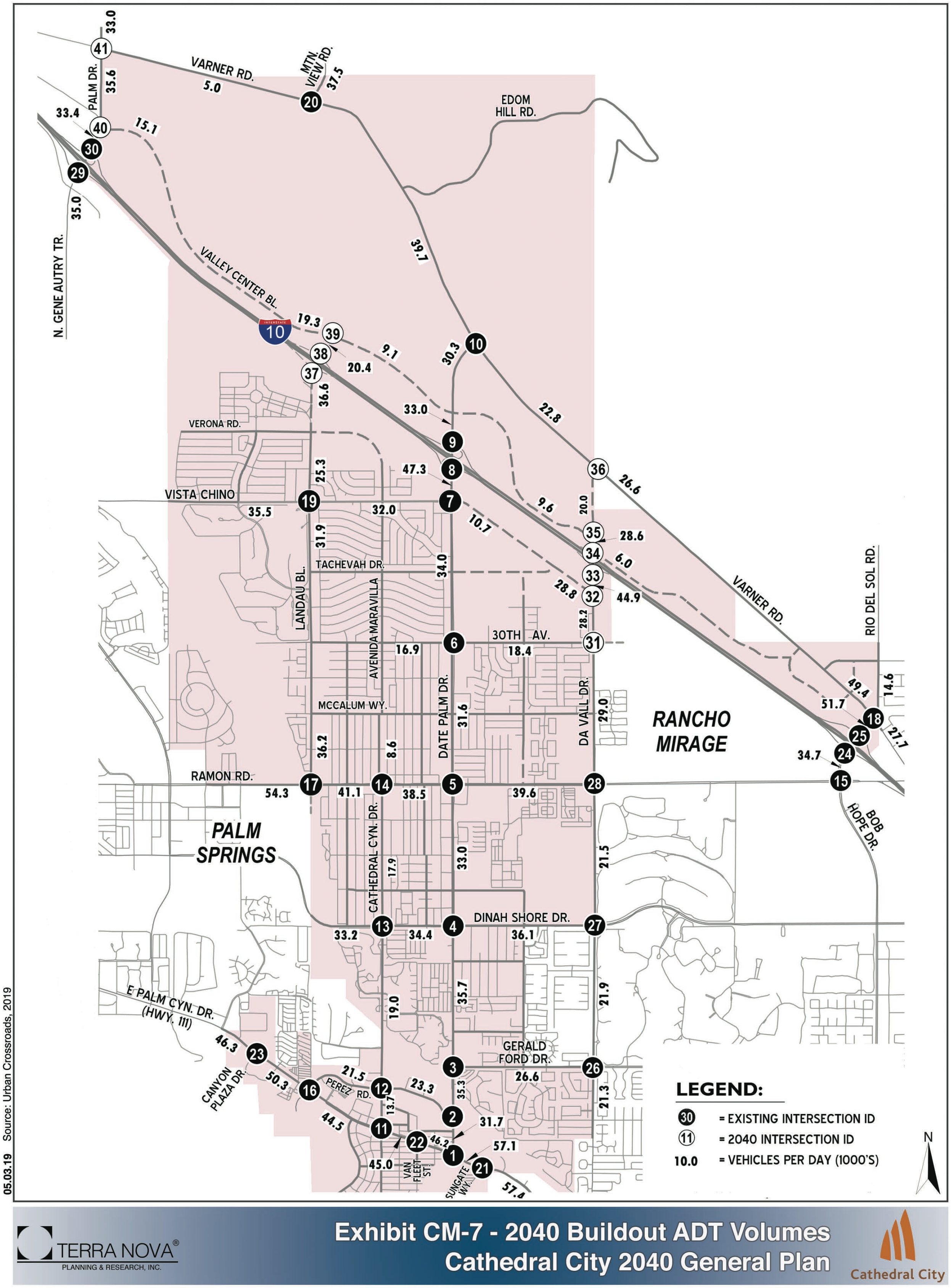


**Exhibit CM-7 - 2040 Buildout ADT Volumes**
**Cathedral City 2040 General Plan**

## ROADWAY CLASSIFICATIONS

To adequately serve future traffic volumes at General Plan buildout, an updated and expanded roadway classification system and cross-sections have been developed for the planning area. Developed in conjunction with the City's *Active Transportation* Plan, these classifications optimize opportunities to include multi-modal facilities within roadway cross-sections. Each major roadway within the study area has been assigned a specific design classification, based on existing and projected traffic demands generated by buildout of the General Plan. Anticipated future traffic volumes and overall community design goals set forth in the General Plan have been used to establish the need for and appropriateness of each roadway classification. The classification plan is illustrated in Exhibit CM-8. Each classification corresponds with the street cross-sections illustrated in the exhibits CM-9A, CM-9B and CM-9C below. Certain refinements may be required when securing rights-of-way and constructing improvements at specific locations.

### Roadway Design Innovations

The updated roadway classifications and cross-sections have been spurred by existing conditions, projected future traffic volumes and changes in state, regional and local transportation policies. In addition to including the road classifications and alignments established by the North City Specific Plan and North City Extended Specific Plan, the updated classifications include:1) three new Arterial Highway designations that address bike lane and buffer options, 2) four new Major Highway designations that account for conditions with and without bike lanes, street parking and buffers, 3) two new Secondary Highway designations that address striped medians and conditions with and without bike lanes, shared NEV/bike lanes, street parking and buffers, and 4) three new Collector designations provide for striped medians and conditions with and without bike lanes, street parking and buffers.

The updated cross-sections explicitly account for and assign bike lanes/shared NEV lanes, while also doing a better job of accounting for existing built road features. The roadway classifications are responsive to Complete Streets and Sustainable Communities strategies that focus on safely serving all transportation users (motorists, delivery services, cyclists, pedestrians, LSEVs). And they take into account existing and projected traffic volumes and previous traffic projections prepared for the North City and North City Extended Specific Plans. Previously analyzed network features are retained in undeveloped areas of the City.

### Roadway Segments Capacity Analysis

The roadway capacities identified in Table CM-5, above, are approximate figures that take into consideration the variations in existing and future available rights-of-way, intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic. The broadened set of classifications allows the General Plan to adapt to these conditions and optimize long-term capacities. All analysed roadway segments are expected to operate at acceptable levels of service in 2040 with the following exceptions:

**Table CM-6**
**General Plan 2040 Segment Deficiencies**

| Roadway Segment | Future Level of Service |
|---|---|
| • Landau Boulevard, north of Ramon Road | (LOS E) |
| • Highway 111, east of Sungate Way | (LOS E) |
| • Dinah Shore Drive, east of Date Palm Drive | (LOS E) |
| • Ramon Road, west of Landau Boulevard | (LOS E) |
| • 30th Avenue, east of Date Palm Drive | (LOS F) |
| • 30th Avenue, west of Date Palm Drive | (LOS E) |

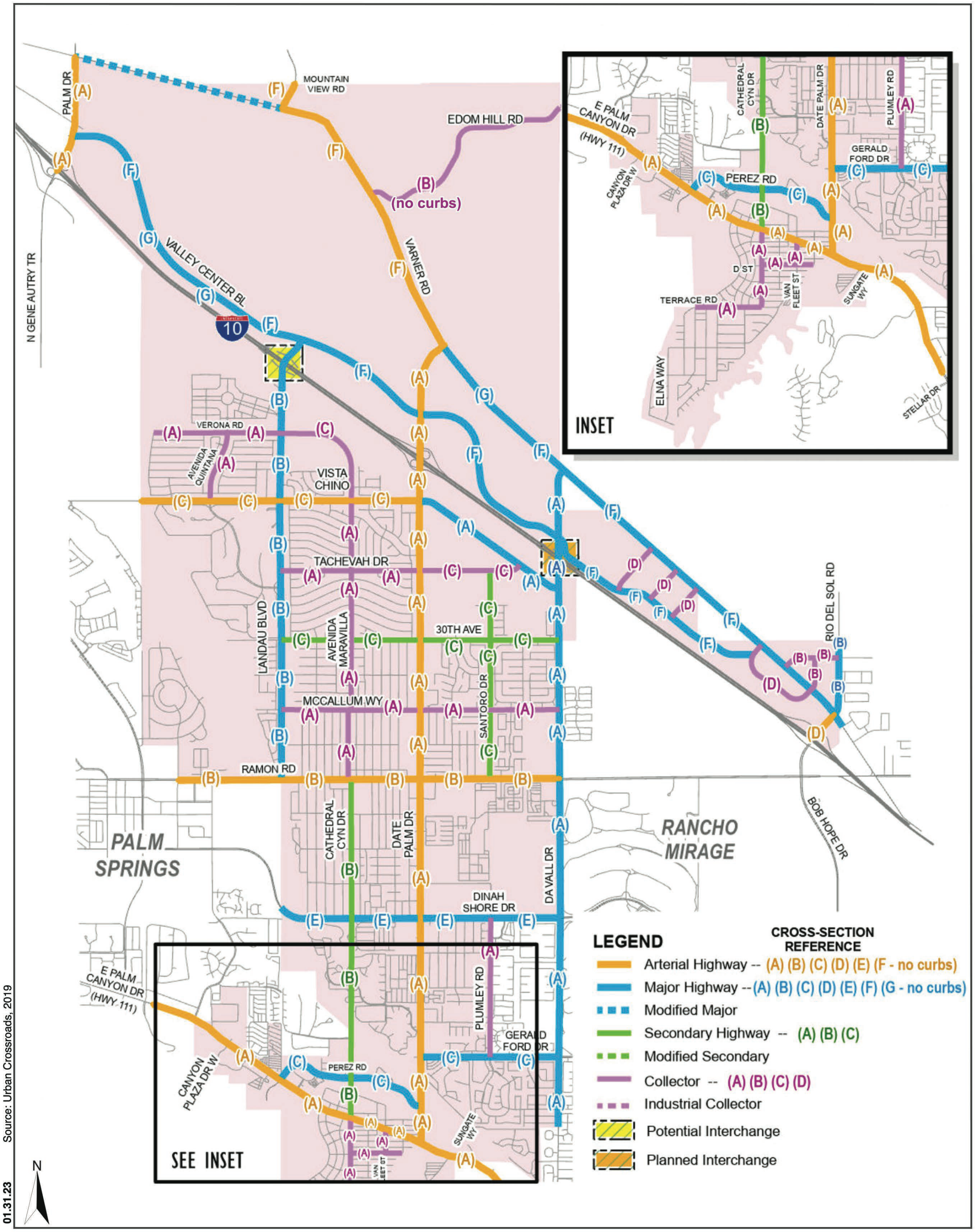


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**Exhibit CM-8 - Master Roadway Classifications**
**Cathedral City 2040 General Plan**

Cathedral City

Perez Road currently has four travel lanes with a continuous center turn lane. The future LOS F operating condition assumed that the road would be restriped to provide two travel lanes with enhanced multi-modal facilities that could reduce vehicle traffic volumes in the future. However, is has been determined that the existing curb-to-curb cross-section and the four travel lanes will be maintained. If this road approaches LOS E or F in the future, the street configuration will be further assessed; however, with four travel lanes maintained, Perez Road is calculated to operate with a worst case V/C ratio of 0.88 or LOS D. Future LOS for 30$^{th}$ Avenue is projected to reach LOS E west of Date Palm Drive and LOS F east of Date Palm Drive. These segments also currently have striped Class II bike paths, which may reduce future vehicle traffic volumes.

The same future condition is projected for Landau Boulevard north of Ramon Road, which could operate at LOS E by 2040, but existing and enhanced future multi-modal facilities may reduce long-term vehicular traffic volumes on this roadway as well. Ramon Road west of Landau Boulevard is projected to operate at LOS E by 2040; however, new and planned multi-modal facilities, including Class I and Class II bike paths, may also reduce long-term vehicular traffic volumes on this segment.

Finally, East Palm Canyon Drive/Highway 111 east of Sungate Way is projected to operate at LOS E by 2040. This LOS constraint is caused by a narrowing of this roadway east of Date Palm Drive to two eastbound travel lanes, which returns to a six-lane configuration immediately east of Buddy Rogers Avenue. Further widening of this constrained roadway segment would require significant modifications to steep mountainous terrain that currently bounds this segment on the south. Nonetheless, it may be possible in the future to add a third eastbound lane if future conditions warrant.

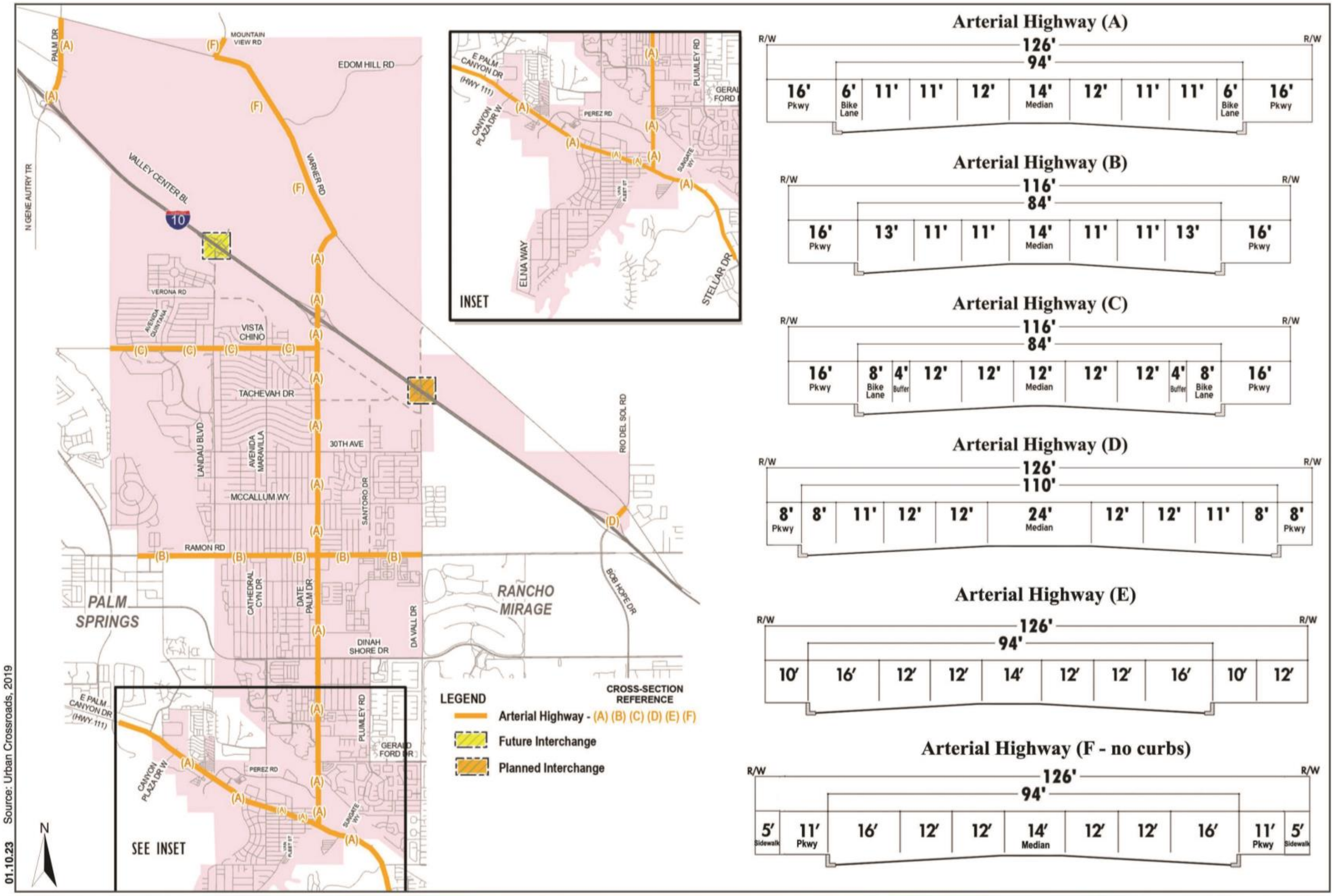


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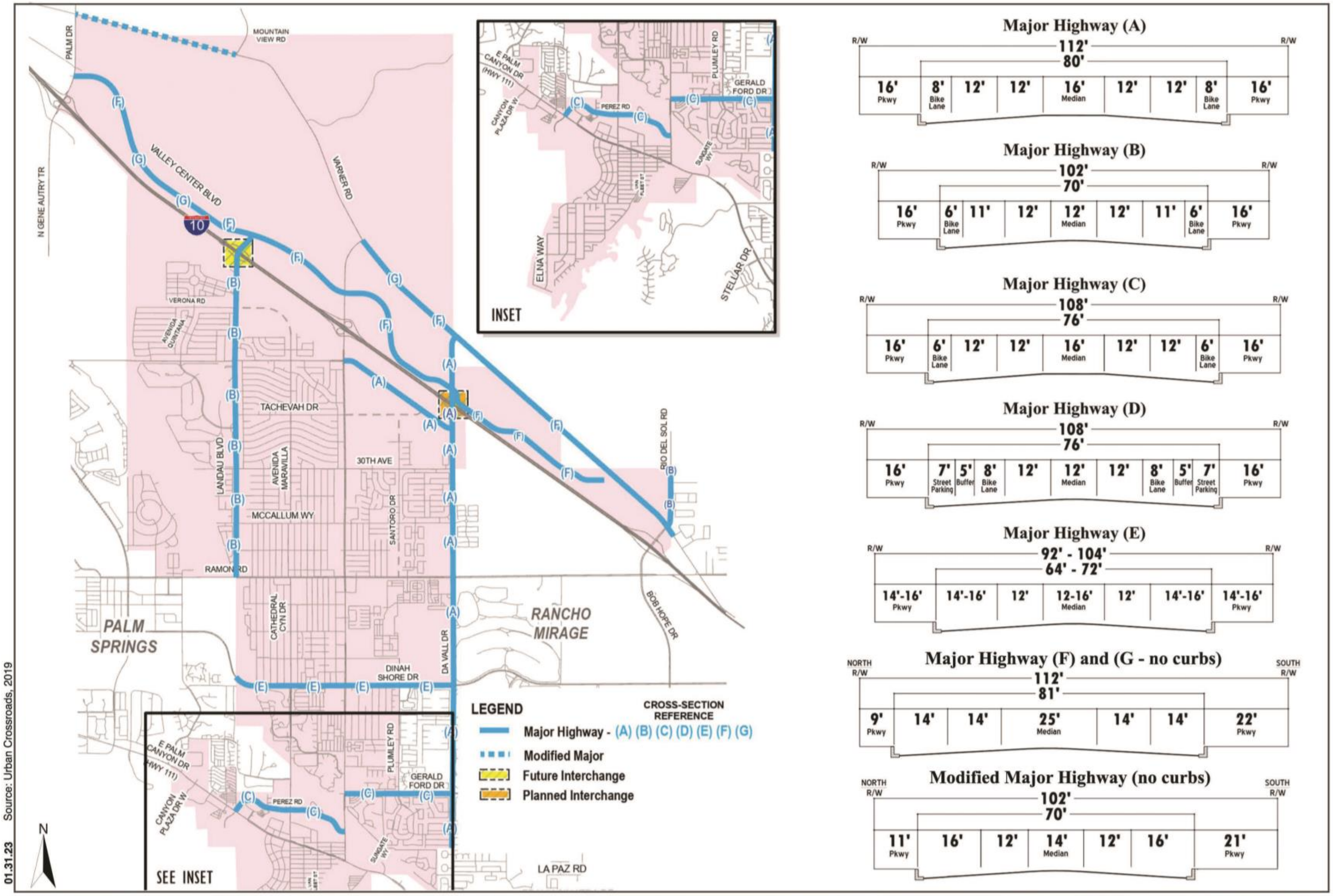
**Exhibit CM-9A - Arterial Highway Classifications**
**Cathedral City 2040 General Plan**

Cathedral City




TERRA NOVA® PLANNING & RESEARCH, INC.

**Exhibit CM-9B - Major Roadway Classifications**
**Cathedral City 2040 General Plan**

Cathedral City

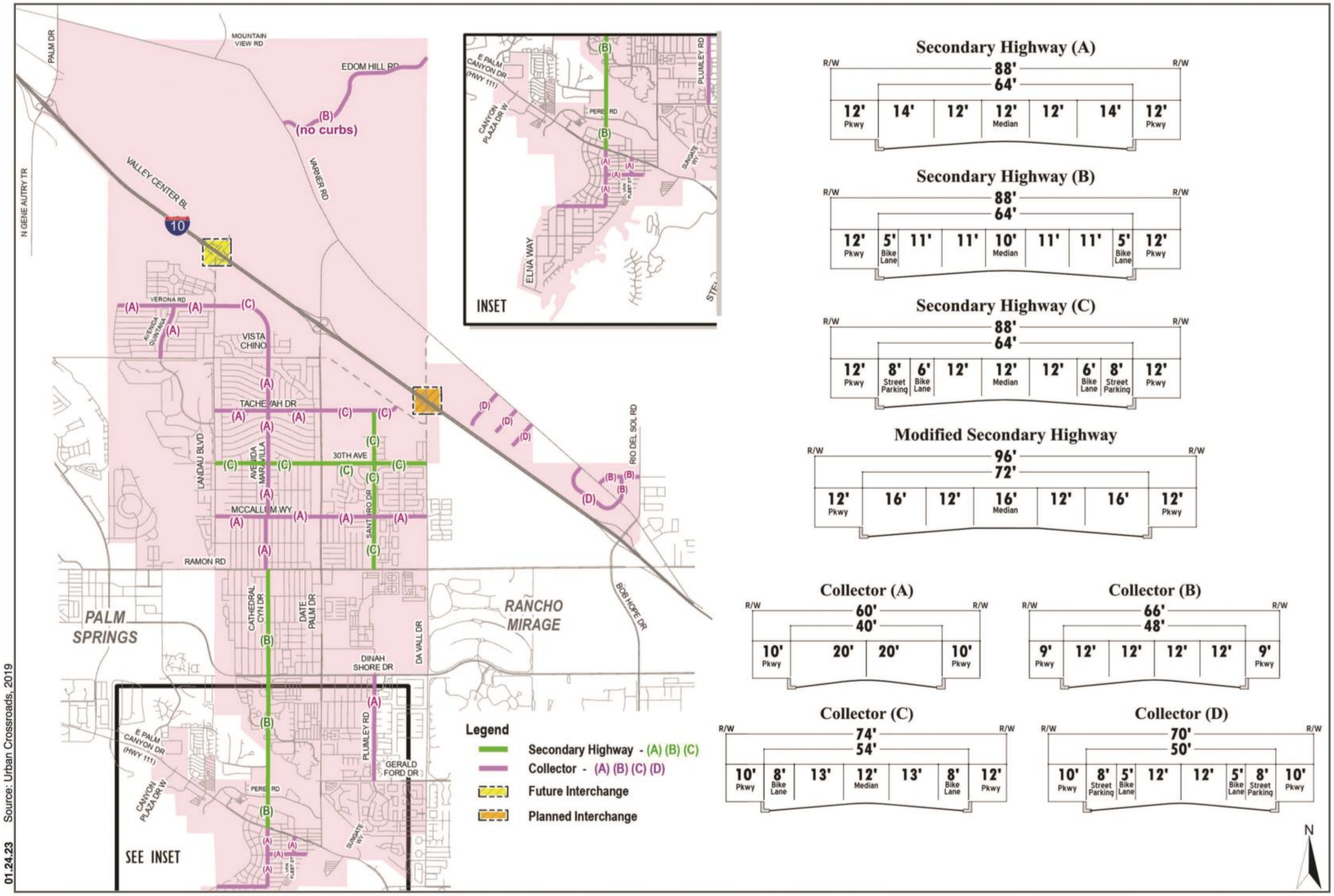



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**Exhibit CM-9C - Secondary and Collector Roadway Classifications**
**Cathedral City 2040 General Plan**

Cathedral City

## Table CM-7 Intersection Future (2040) Operating Condition

| # | Intersection | Traffic Control[3] | Intersection Approach Lanes[1] | | | | | | | | | | | | Delay[2] (Secs) | | Level of Service[2] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | | | | |
| | | | L | T | R | L | T | R | L | T | R | L | T | R | AM | PM | AM | PM |
| 1 | Date Palm / E. Palm Cyn. Dr. (Hwy 111) | TS | 0 | 0 | 0 | 3 | 0 | 1> | 2 | 3 | 0 | 0 | 3 | 1 | 18.4 | 41.4 | B | D |
| 2 | Date Palm / Perez Rd.[4.] | TS | 1 | 2 | 0 | 0 | 2 | 1> | *1* | 0 | 1 | 0 | 0 | 0 | 14.0 | 26.9 | B | C |
| 3 | Date Palm / Gerald Ford Dr. | TS | 1 | 2 | 1 | 1 | 2 | d | 1 | 2 | 0 | 1.5 | 0.5 | 1 | 43.7 | 54.4 | D | D |
| 4 | Date Palm / Dinah Shore Dr. | TS | 2 | 2 | 1 | 2 | 3 | 0 | **2** | *2* | 1 | 1 | 2 | 1> | 44.4 | 42.0 | D | D |
| 5 | Date Palm / Ramon Rd. | TS | 2 | **3** | 1 | 1 | **3** | 1 | **2** | 3 | **1** | 1 | 3 | **1** | 45.6 | 43.2 | D | D |
| 6 | Date Palm / 30th Av. | TS | **2** | 3 | 0 | **2** | 3 | 0 | 1 | **2** | **1** | 1 | **2** | **1** | 48.0 | 46.4 | D | D |
| 7 | Date Palm / Vista Chino | TS | **2** | 3 | 0 | 1 | **2** | **2>** | 2 | 1 | *1>* | 1 | *2* | *1* | 54.0 | 39.8 | D | D |
| 8 | Date Palm / I-10 EB Ramps | TS | 0 | 3 | 1>> | 0 | 3 | 1>> | 1 | 1! | 1 | 0 | 0 | 0 | 27.5 | 6.9 | C | A |
| 9 | Date Palm / I-10 WB Ramps | TS | 0 | 3 | 1>> | 0 | 3 | 1>> | 0 | 0 | 0 | 1 | 1! | 1 | 14.8 | 14.7 | B | B |
| 10 | Date Palm / Varner Rd. | **TS** | **2** | 0 | 1 | 0 | 0 | 0 | 0 | 1 | **1>** | **1** | 1 | 0 | 34.8 | 45.5 | C | D |
| 11 | Cathedral Cyn. Dr./E. Palm Cyn. Dr. (Hwy 111) | TS | 1 | 1 | 1 | 1 | 1 | 1> | 1 | 2 | 1 | 1 | 3 | 1 | 31.3 | 43.1 | C | D |
| 12 | Cathedral Cyn. Dr. / Perez Rd[4]. | TS | 1 | 2 | 0 | 1 | 2 | 0 | 1 | *2* | *1* | 1 | *1.5* | *0.5* | 39.2 | 54.8 | D | D |
| 13 | Cathedral Cyn. Dr. / Dinah Shore Dr. | TS | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 | **65.4** | **>80** | **E** | **F** |
| 14 | Cathedral Cyn. Dr. - Avenida Maravilla/Ramon Rd. | TS | 1.5 | 0.5 | 1> | 0.5 | 0.5 | 1> | 1 | 3 | 0 | 1 | 3 | 0 | **>80** | **>80** | **F** | **F** |
| 15 | Bob Hope Dr. / Ramon Rd. | TS | 2 | 3 | **1>>** | 2 | 3 | **1>>** | 2 | **3** | **1>** | 2 | **3** | 1 | 48.3 | 39.8 | D | D |
| 16 | Perez Rd[4] / E. Palm Cyn. Dr. (Hwy 111) | TS | 1 | 1 | 0 | 1 | 0.5 | 1.5> | 2 | 3 | 0 | 1 | 2 | 1 | 28.3 | 38.9 | C | D |
| 17 | Landau Bl. / Ramon Rd. | TS | **1** | **1** | 0 | 2 | **0.5** | **1.5** | **2** | **3** | 0 | **1** | **3** | **1>** | 45.3 | 49.0 | D | D |
| 18 | Bob Hope Dr. / Varner Rd. | TS | 2 | 2 | 1>> | 2 | **3** | 1 | 2 | 2 | **2>>** | 2 | 2 | 0 | 54.4 | 44.2 | D | D |
| 19 | Landau Bl. / Vista Chino | TS | **2** | 2 | 0 | *2* | 2 | 0 | 1 | 2 | **1>** | 1 | 2 | *1>* | 54.7 | 45.6 | D | D |
| 20 | Mountain View Rd. / Varner Rd. | **TS** | 0 | 0 | 0 | **2** | 0 | **1** | 0 | 1 | 0 | 0 | 1 | **2** | 42.4 | 38.0 | D | D |
| 21 | Sungate Wy. / E. Palm Cyn. Dr. (Hwy 111) | TS | 1 | 1 | 0 | 0.5 | 0.5 | 1 | 1 | 2 | 1 | 1 | 3 | 0 | 18.0 | 34.0 | B | C |
| 22 | Van Fleet St. / E. Palm Cyn. Dr. (Hwy 111) | TS | 0.5 | 0.5 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 16.7 | 39.7 | B | D |
| 23 | Canyon Plaza Dr. / E. Palm Cyn. Dr. (Hwy 111) | TS | 0.5 | 0.5 | d | 0.5 | 1.5 | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 33.4 | 52.6 | C | D |
| 24 | Bob Hope Dr. / I-10 EB Ramps | TS | 0 | 2.5 | 1.5 | 2 | **3** | 0 | 1 | 1! | 1 | 0 | 0 | 0 | 28.4 | 31.1 | C | C |
| 25 | Bob Hope Dr. / I-10 WB Ramps | TS | 2 | **3** | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 1.5 | 0.5 | 1>> | 13.5 | 45.0 | B | D |
| 26 | Da Vall Dr. / Gerald Ford Dr. | TS | **2** | 2 | 1 | **2** | 2 | **1** | **2** | 2 | **1** | **2** | 2 | **1** | 34.3 | 36.6 | C | D |
| 27 | Da Vall Dr. / Dinah Shore Dr. | TS | **2** | 2 | 1 | **2** | 2 | **1** | **2** | 2 | 1 | **2** | 2 | **1** | 36.6 | 39.0 | D | D |
| 28 | Da Vall Dr. / Ramon Rd. | TS | **2** | 2 | 1 | **2** | **2** | **1** | **2** | 3 | **1>** | **2** | 3 | **1>** | 42.8 | 46.1 | D | D |
| 29 | Gene Autry Tr. / I-10 EB Ramps | TS | 0 | 3 | 1>> | 0 | 3 | 1>> | 1 | 1! | 1 | 0 | 0 | 0 | 6.7 | 5.8 | A | A |

## Table CM-7 Intersection Future (2040) Operating Condition

| # | Intersection | Traffic Control[3] | Intersection Approach Lanes[1] | | | | | | | | | | | | Delay[2] (Secs) | | Level of Service[2] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | | | | |
| | | | L | T | R | L | T | R | L | T | R | L | T | R | AM | PM | AM | PM |
| 30 | Gene Autry Tr.-Palm Dr. / I-10 WB Ramps | TS | 0 | 3 | 1>> | 0 | 3 | 1>> | 0 | 0 | 0 | 1 | 1! | 1 | 16.0 | 10.2 | B | B |
| 31 | Da Vall Dr. / 30th Av. | **TS** | **1** | **2** | 0 | **1** | **2** | 0 | 1 | 1 | d | 0.5 | 0.5 | d | 29.2 | 54.3 | C | D |
| 32 | Da Vall Dr. / Vista Chino | **TS** | **1** | **2** | 0 | 0 | **2** | **1>** | **2** | 0 | **1** | 0 | 0 | 0 | 25.7 | 44.7 | C | D |
| 33 | Da Vall Dr. / I-10 SB Ramps | **TS** | 0 | **2** | **2** | **1** | **2** | **0** | 0 | **1!** | **1** | 0 | 0 | 0 | 54.8 | 20.1 | D | C |
| 34 | Da Vall Dr. / I-10 NB Ramps | **TS** | **2** | **2** | 0 | 0 | **2** | **1** | 0 | 0 | 0 | **2** | 0 | **1** | 34.1 | 46.3 | C | D |
| 35 | Da Vall Dr. / Valley Center Bl. | **TS** | **2** | **2** | 0 | **1** | **2** | 0 | **1** | **2** | **1** | **1** | **2** | 0 | 17.7 | 20.2 | B | C |
| 36 | Da Vall Dr. / Varner Rd. | **TS** | **1** | **1!** | **1** | 0 | 0 | 0 | 0 | **2** | 0 | **1** | **2** | **0** | 43.0 | 53.0 | D | D |
| 37 | Landau Bl. / I-10 SB Ramps | **TS** | 0 | **3** | *1* | **1** | **3** | 0 | **0.5** | **0.5** | **1** | 0 | 0 | 0 | 53.8 | 54.4 | D | D |
| 38 | Landau Bl. / I-10 NB Ramps | **TS** | **1** | **3** | 0 | 0 | **3** | 0 | 0 | 0 | 0 | **0.5** | **0.5** | **1** | 48.9 | 54.2 | D | D |
| 39 | Landau Bl. / Valley Center Bl. | **TS** | **1** | 0 | **1** | 0 | 0 | 0 | 0 | **2** | **1>** | **1** | **2** | 0 | 13.6 | 23.4 | B | C |
| 40 | Palm Dr. / Valley Center Bl. | TS | 1 | 2 | **1** | **2** | 2 | 0 | **1** | **2** | 0 | 1 | **1** | **1** | 29.8 | 31.3 | C | C |
| 41 | Palm Dr. / Varner Rd. | TS | 1 | 2 | 0 | 1 | 2 | 0 | **1** | 1 | 0 | **1** | 1 | 0 | 40.2 | 30.1 | D | C |

1. When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
   L = Left; T = Through; R = Right; 1! = Shared Left/Through/Right Lane; 0.5 = Shared Lane; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane; 1 = Lane Improvement; 1 = Lane Configuration Change in comparison to Adopted Improvements
2. Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control.
   For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
   Delay and level of service is calculated using Synchro 10.1 analysis software.
   BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).
3. TS = Traffic Signal
4. Adopted GP returns Perez Road to four travel lanes along entire length. Resulting capacity is equal to or greater than that cited in this table.
   R:*\UXRjobs_11100-11500\11326\Excel\[11326 - LOS Results - values.xlsx]2040 Proposed*

### Intersection Operations Analysis (2040)

While the General Plan analysis focuses on the capacity and operation of roadway segments, the most influential controlling factors of the roadway system are found at intersections. Intersections are generally the most critical and constrained locations within the local street network and the ultimate arbiters of capacity. The acceptable level of service established by the General Plan is LOS D. As shown in Table CM-7, study area intersections are anticipated to operate at an acceptable LOS during the peak hours in 2040, with the exception of the following:

• Cathedral Canyon Drive @ Dinah Shore Drive – LOS E AM peak hour / LOS F PM peak hour
• Cathedral Canyon Drive & Avenida Maravilla @ Ramon Road – LOS F AM and PM peak hours

### City Truck Routes

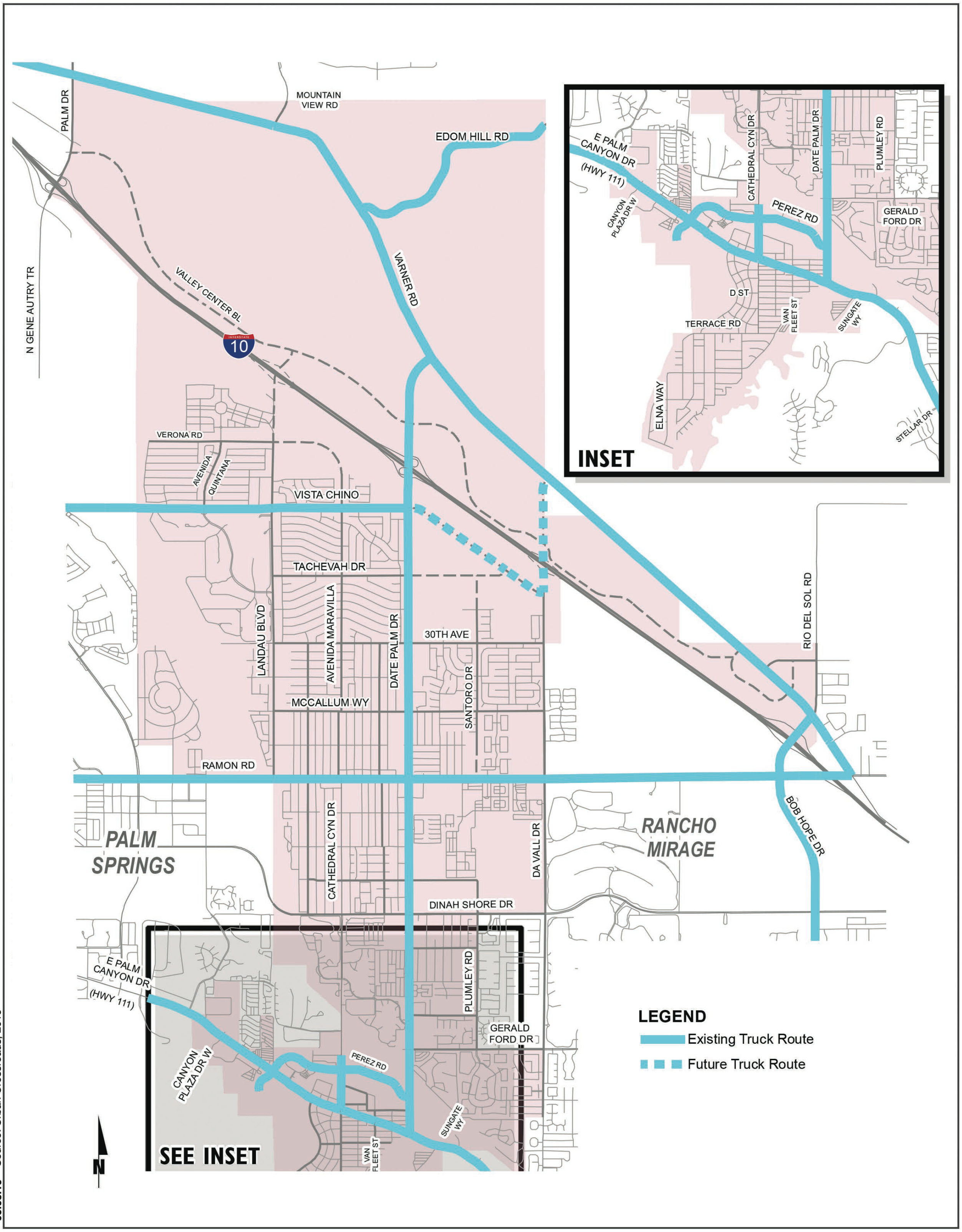
Previously established truck routes include Varner Road, Edom Hill Road, Date Palm Drive, Bob Hope Drive, Vista Chino, Ramon Road, Perez Road, a section of Cathedral Canyon Drive, and East Palm Canyon Drive/Highway 111. Although not so designated by the General Plan, US Interstate-10 is, of course, an important truck route that is outside the City's authority to manage. And I-10 interchanges are the only points of access from the interstate onto the City roadway network.

Truck routing involves several considerations. First, truck drivers do not always have good information about approved truck routes or truck-restricted routes. In some cases, truck routes are not consistent from one jurisdiction to another, leading to driver confusion. Some routes are also not well signed. Truck drivers often use internet-sourced maps to determine routing, which may be misleading because not all "major" routes on map sources actually allow trucks. Some may in fact be truck restricted but there is no easy way for the drivers to know.

Finally, in some cases all of these factors lead trucks to use a route that should not be used due to adjacent sensitive land uses such as residences or schools, or they use routes that are not adequate for heavy vehicle activity due to physical design features such as horizontal and vertical curves, or pavement condition. To support the demand for truck activities, two additional truck routes have been identified for Cathedral City:

• Da Vall Drive from Vista Chino (extended) to Varner Road
• Vista Chino (extended) from Date Palm Drive to Da Vall Drive

It should also be noted that the assignment of truck routes must follow the procedures set forth in the California Vehicle Code Sec. 35700 et. seq. The existing and future truck routes are shown on Exhibit CM-10, below.




TERRA NOVA® PLANNING & RESEARCH, INC.

**Exhibit CM-10 - Existing and Future Truck Routes**
**Cathedral City 2040 General Plan**

Cathedral City

## LONG RANGE DEFICIENCIES AND RECOMMENDATIONS

As noted above, certain, limited deficiencies are projected to occur within the City roadway network by the 2040 General Plan buildout, including eight roadway segments and two intersections. Special attention will be required at these portions of the roadway network to minimize and/or avoid reaching unacceptable operating conditions.

Cathedral Canyon Drive Corridor and Intersections
Cathedral Canyon Drive from Perez Road to Ramon Road is identified as a special study corridor that continues to provide four travel lanes. As noted and shown in Table CM-7, the Cathedral Canyon Drive intersection at Dinah Shore Drive and at Cathedral Canyon Drive -Avenida Maravilla at Ramon Road are projected to operate at unacceptable level of service by or before the year 2040. These intersections are constrained by existing development, and intersection geometry/signalization changes have not been identified to reasonably improve operations. In addition, the intersection of Cathedral Canyon Drive - Avenida Maravilla at Ramon Road experiences unacceptable operations for existing (2018) conditions. The existing (2018) unacceptable level of service at the intersection of Cathedral Canyon Drive at Ramon Road is expected to continue. Intersection geometry / signalization changes have not been identified that can reasonably improve operations.

Intersections along Cathedral Canyon Drive are constrained by existing development, and mobility enhancements for all modes are desirable and have been considered. Sections of Cathedral Canyon Drive (from Dinah Shore Drive to Ramon Road) provide direct access to/from single-family home driveways. Parallel roads to the east and west of Cathedral Canyon Drive provide limited alternative access through residential areas, but are discontinuous.

The City will continue to study the Cathedral Canyon Drive corridor and other roadway segments projected to operate at unacceptable LOS in 2040, and monitor their operations on an ongoing basis to develop further recommendations for improvements. Specific tasks would involve identifying a corridor's strengths, weaknesses, and opportunities for improvements. This special study will serve as a valuable step in achieving the City's desire to implement long-term community and citywide mobility and parking improvement projects. Recommendations for further enhancements must balance the needs to improve mobility, safety, parking, and the corridor's appearance.

Other Roadway Segments
As noted in Table CM-6 above, eight roadway segments are projected to operate at unacceptable (LOS E & F) levels of service within the 2040 General Plan buildout period. Application of the City's *Active Transportation Plan* and re-striping of the existing and future street cross-sections may delay or avoid projected inadequacies. The City will monitor these segments on an ongoing basis and require detailed assessments when proposed future development is inconsistent with the Land Use Plan.

### Monitoring and Adaptive Management

As noted above and shown in Table CM-6, eight roadway segments are projected to operate at LOS E or F by 2040. As a part of the General Plan traffic analysis, a more detailed peak hour intersection analysis conducted for the General Plan explicitly accounts for factors that affect roadway segment capacity. Therefore, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. The detailed analysis indicates that no roadway widening to provide additional through-lanes will be needed. Therefore, those segments projected to operate at LOS E or F may in fact operate at acceptable LOS in 2040. Nonetheless, the City will continue to analyze these segments and other portions of the roadway network to ensure acceptable long-term operating conditions.

It should also be noted that while limited portions of the existing and planned roadway network are projected to operate at unacceptable levels of service, the City's substantial push to integrate expanded multi-modal facilities may reduce future impacts to roadway segments and intersections. The City shall continue to conduct ongoing monitoring and adaptation be conducted to address existing and future deficiencies.

## Pedestrian Circulation

The General Plan and associated documents support planning that allows and enhances access to commercial services and places of employment and recreation without the essential use of motorized vehicles. In this regard, pedestrian and other non-motorized circulation are encouraged in the City wherever possible. Master planning sidewalks, bike lanes and off-street trails is especially important along major roadways in the community. Development that occurred prior to the City's incorporation includes areas where sidewalks are non-existent or discontinuous, limiting their usefulness as safe alternatives to vehicle travel. When considering future development, pedestrian and bicycle accommodation and safety should be given emphasis equal to that currently given to automobile access.

## Parking: A New Paradigm

The issue of parking creates angst for just about everyone, including community residents, shoppers, business owners and developers, and municipalities. Surface parking is a major and frequently wasteful use of land in almost all types of development. For instance, commercial parking standards are frequently designed to meet the demand generated during just a few days of peak holiday shopping and demand, leaving a sea of largely unused parking the rest of the year. In addition to being an inefficient use of land, vacant parking lots are not attractive and send the wrong message to the shopper that can discourage shopping at these locations.

A similar case of residential over-parking is associated with applying rental housing standards to owner-occupied housing. Also, consideration is not always given to differing demand from single-family versus multi-family housing or the size of housing units. At the same time, there is a shift in home ownership and motor vehicle ownership patterns, and many are foregoing car ownership altogether and relying on transit and other modes of travel. Some of the factors that affect parking demand include geographic location and proximity to other land uses, residential density, employment density, land use mix, access to transit, car-sharing, walkability and bikeability, demographics, income, housing tenure, and other factors.

Parking lot ingress and egress can also affect adjoining roadway capacity and should be thoughtfully controlled. Consolidation of parking lot entrances should be encouraged to reduce curb cuts, minimize disruptions to traffic flow and facilitate the preservation of capacity, while still assuring vehicular and multi-modal safety.

## Transportation Demand Management

The urbanization of the Coachella Valley is expected to continue in the decades to come, and with continued growth, transportation demand and systems management will be necessary to preserve and increase available roadway capacity. Transportation Demand Management (TDM) requires the development and implementation of policies, plans and programs that result in the use of a wider range of transportation alternatives, including public transit and bicycles.

While an emphasis on alternative travel modes, such as carpooling, van pooling and mass transit will help, TDM can also include employee flex-time work schedules that reduce peak hour travel and associated traffic congestion. In response to state mandates, the Riverside County Transportation Commission (RCTC) prepared a regional Congestion Management Program, which required Cathedral City and other cities to prepare TDM ordinances or risk the loss of federal transportation funds. The City has adopted a TDM ordinance.

## Railroad Facilities

The City is host to a major railroad corridor located immediately south of and parallel to US I-10. Rail freight service through the Coachella Valley is provided by the Union Pacific Railroad (UPRR), with freight transfer facilities located in Indio and Coachella. These Union Pacific facilities carry between 30 and 40 freight trains per day. In recent years, Union Pacific has added a full second track, which is projecting an associated 50%-70% increase in rail traffic. In addition, Amtrak passenger service is accessible at the Palm Springs station located just west of Indian Canyon Drive in Palm Springs on Union Pacific's line. Currently, one eastbound and one westbound Amtrak train stops at the station in the early AM.

These rail lines are designated as Centralized Track Control (CTC) facilities and include extensive electronic switching and communication facilities. Construction of drill spurs is possible to serve adjoining passenger or industrial uses and can range from $84,000 to $92,000 (2017). These costs do not include special engineering requirements associated with potential engineering constraints.

### Palm Springs International Airport (PSP)

Primary air transportation for Cathedral City, the Coachella Valley and the region is provided by the Palm Springs International Airport (PSP), which is classified in the National Plan of Integrated Airport Systems (NPIAS) as a long-haul commercial service airport. PSP is accessed from Ramon Road and El Cielo Road and provides short-term parking near the terminals and long-term parking farther south.

PSP encompasses 930± acres and is capable of supporting non-stop commercial service to destinations over 1,500 miles away and is classified as a small hub air passenger airport, based upon the percentage of national airline enplanements it supports. Since 1972, airport services have increased from 143,809 passenger enplanements to 486,644 in 1994. In 1998, the number of enplanements reached 629,473, and deplanements totaled 628,068. For all of 1998, the number of passengers arriving and departing the airport totaled 1,256,541. By 2007, full-year enplanements totaled 1,610,943 with March being the peak month.

Major destination cities include Los Angeles, San Francisco, Chicago, Denver, Las Vegas, Seattle, Dallas and New York. Major carriers include Alaska, American, United Express, Delta and others. Commercial traffic is clearly seasonal, with the peak season being the January-February-March period and the slowest period occurring during the summer months. Commercial and passenger operations are expected to continue to grow.

### Major Utility Corridors

Major corridors and easements for the transport of natural gas, electricity, communications, domestic water and sewerage, and storm drainage are also important components of the Circulation and Mobility Element. Generally, the need for utility corridors is met through the provision of easements in or adjacent to City streets and along common lot lines.

Major electricity, natural gas and petroleum product transmission corridors were established prior to incorporation of the City and are generally located north of Interstate-10. These include a Southern California Edison high voltage transmission corridor located on Flat-top Mountain and just south of Edom Hill. Future land use planning, including the development of subdivisions and the processing of development applications, require coordination between the City, developers, utility companies, and other service providers to assure the availability and provision of easements and rights-of-way for the extension of roads, utility lines, and public services (also see *Public Facilities and Services Element*).

## FUTURE DIRECTIONS

Transportation technology and vehicular travel in general may change profoundly in the coming decade. Beyond the ongoing electrification of cars and trucks, the technology to allow the use of self-driving (autonomous) vehicles (AVs) is rapidly developing and in use in limited ways in 2019. A wide range of other traffic control and optimization technologies are also emerging that will allow our roads to carry more and a more varied mix of vehicles, and enhance safety.

### Automated Vehicles

Driverless cars or autonomous vehicles have made their debut on streets in many American cities and their full deployment may be only a few years away. As G5 cellular networks and other advance communication technologies are deployed they will further enable the launch of AVs and this could have profound effects on the use of the roads, roadway capacity, travel time, and even on vehicle ownership.

In the next few years, the City can capture a comparable (and competitive) advantage by developing regulations and incentives that could have a significant effect on the implementation of AVs in the City. A robust AV market would allow residents to "mix and match" bus transit and low-cost, point-to-point travel in AV-taxis, and autonomous shuttles and buses. Priorities to serve AV travel include synchronization of insurance regulations, uniform safety rules, common data standards, and solid communication protocols.

A safe AV network in the City and Coachella Valley is likely to require new types of hardware and regulation, including storage and maintenance facilities for shared autonomous fleets, fast-charging infrastructure, and dedicated AV lanes equipped with vehicle-to-vehicle and vehicle-to-infrastructure communications, and associated IT systems. California and the federal government are working to address these issues.

### The Future: For Now

As a whole, this General Plan policy document, transportation technical reports and Program EIR provide direction for the future planning of the City's roadway and circulation system. Areas of special concern have been identified and are further addressed in the General Plan Program EIR and Transportation Analysis report (see Appendix E of the EIR. The above cited "Special Study Zones" and other areas of future focused analysis should be initiated as soon as is reasonably possible.

In addition to focused studies, the City will also continue to monitor and review land use trends and changes in traffic volumes and patterns. Periodic adjustments to planning and program implementation may be made by utilizing roadway improvement and maintenance management programs, regular traffic monitoring on major roadways, and conducting ongoing inventories of current traffic and circulation patterns. Formal traffic monitoring should be conducted, at a minimum, once every two years.

The City will also pursue on-going coordination with state, regional and local agencies that have shared jurisdiction over the state highways in the community. Through the implementation of this element and involvement with regional, state and federal regulators, the City will progressively alleviate current problems, improve capacity for all modes of travel and avoid future system inadequacies.

## GOALS, POLICIES AND PROGRAMS

**Goal 1:** An intra- and inter-city transportation system that provides for the safe, efficient, diverse and cost-effective movement of people and goods, and enhances commerce and the overall economic well-being of the entire community.

**Goal 2:** A City-wide and neighborhood-specific transportation system that is responsive to, and which implements the New Urbanism principles of community design, through land use and transportation planning.

> **Policy 1:** The City circulation and mobility network shall be planned and developed to assure the provision of safe and efficient vehicular, pedestrian, bicycle and LSEV access to all parts of the community, effectively linking residents and visitors to the full range of residential, employment, shopping, and recreational land uses.
>
> > **Program 1.A:** The City shall establish a schedule to study and evaluate "Special Study Zones" identified in the General Plan where detailed analysis shall be conducted to minimize further degradation of operating conditions at these locations to assure that these areas are appropriately designed, and improvement funding is planned to address projected impacts.
> > **Responsible Agency**: Public Works, Planning, City Engineering, Planning Commission, City Council
> > **Schedule:** 2020, On-going

**Program 1.B:** The Public Works Department shall establish and implement a prioritized roadway and intersection study and analysis program to assure the provision of adequate future rights-of-way and facilities at critical roadways and intersections. This program may be incorporated into the five-year Capital Improvements Program, which should be reviewed and amended, as necessary, annually.
**Responsible Agency**: Public Works, Planning, City Engineer
**Schedule:** 2020, On-going

**Policy 2:** Transit stops and pedestrian, bicycle and LSEV paths shall be sited in conformance with the General Plan roadway classifications and the City Active Transportation Plan. Standards and guidelines shall be applied in a manner that encourages the use of alternatives modes of transportation and provides safe, convenient access to commercial and employment centers, as well as institutional and recreational land uses.

**Program 2.A:** A planning and engineering project review checklist will be developed, which addresses all major roadway components and ensures compliance with the provisions of the Circulation and Mobility Element and the Active Transportation Plan. The checklist will be used in reviewing development proposals.
**Responsible Agency**: Public Works, Planning, City Engineer
**Schedule:** 2020, On-going

**Policy 3:** The City shall assure that the current and future City roadway segments and intersections maintain minimum operating standards that do not exceed Level-of-Service (LOS) “D” during peak hours of traffic. Along roadway segments and intersections where LOS D may not be achievable after applying all practicable measures, the City shall find LOS “E” during peak hours to be provisionally acceptable.

**Program 3.A:** The Circulation and Mobility Element and supporting technical reports shall be periodically reviewed to compare current conditions with the goals and policies of the element, and to assure that adopted facility standards and classifications are consistent with actual and projected traffic volumes.
**Responsible Agency**: Public Works, Planning, City Engineer
**Schedule:** 2020, On-going

**Program 3.B:** Identified roadway segments and intersections projected to operate at LOS E or worse at General Plan buildout are hereby designated as “Special Study Zones” where detailed analysis shall be conducted to minimize further degradation of operating conditions at these locations.
**Responsible Agency:** Planning, Engineering, Transportation Commission
**Schedule:** Immediately, On-going

**Program 3.C:** The City shall develop and implement roadway improvement standards which limit direct access to arterial roadways and provide raised median islands, to the greatest extent practical, in order to maximize roadway capacity and limit turning movement conflicts.
**Responsible Agency:** Planning, Engineering, Transportation Commission
**Schedule:** 2020, On-going

**Program 3.D:** The City shall coordinate with Caltrans, City of Rancho Mirage, CVAG and other interested parties in the planning, design, engineering and development of an Interstate-10 interchange with Da Vall Drive, extended.
**Responsible Agency:** Public Works, City Engineer, Planning Commission, City Council, Caltrans, CVAG, Rancho Mirage
**Schedule:** Immediately, On-going

**Policy 4:** Given the programmatic nature of the General Plan traffic analysis, development proposals which may generate traffic volumes or other impacts beyond the scope of the General Plan analysis should be required to conduct project-specific traffic studies to assure that project impacts are adequately mitigated.

**Program 4.A:** City staff shall analyze development proposals to determine the potential of the project to adversely impact mid-block segments or intersections. Development impacts shall be identified, and fair-share mitigation shall be established and incorporated into the conditions of approval.
**Responsible Agency:** Planning, City Engineer, Public Works, Planning Commission, City Council
**Schedule:** On-going

**Policy 5:** Mixed-use and other integrated development plans may propose the construction of public and/or private streets that conform with the New Urbanism and Complete Streets design principles, assuming sufficient technical support to argue for their safe and efficient use is provided, and the concerns of all public service and protection providers are satisfied.

**Program 5.A:** The City shall encourage and if necessary require developers to explore alternative designs of streets and other transportation facilities by providing, as appropriate, information on Complete Streets design concepts and standards that may meet basic performance and safety needs, while still being responsive to the New Urbanism principles.
**Responsible Agency:** Planning, Engineering, Transportation Commission, Planning Commission, City Council
**Schedule:** Immediately, On-going

**Policy 6:** In order to preserve the capacity of the City's major roadways and assure a safe and economical circulation system, development proposed along arterial roadways shall be designed to limit access to these arterials to the minimum needed to effectively serve the development.

**Program 6.A:** The City shall apply to all development plans the adopted roadway classifications, and implement the Active Transportation Plan to maximize walking, bicycling, and use of LSEVs, and assure safe and efficient connections to City-wide and regional multi-modal facilities.
**Responsible Agency:** Public Works, Planning, City Engineer, Planning Commission, City Council
**Schedule:** Immediately; Ongoing

**Program 6.B:** On Arterial Highways the minimum intersection spacing shall be 1,060 feet. The design speed shall be 50 mph. Left-turn median cuts may be authorized if the proposed turn pocket does not interfere with other existing or planned left-turn pockets. Right in/right out access driveways shall meet or exceed the following minimum separation distances (in all cases, distances shall be measured between the curb returns):
- more than 250 feet on the approach leg to a full turn intersection;
- more than 150 feet on the exit leg from a full turn intersection;
- more than 275 feet between driveways.

All access configurations shall require City Engineer review and approval.
**Responsible Agency:** Public Works, Planning, City Engineer, Planning Commission, City Council
**Schedule:** Immediately; Ongoing

**Program 6.C:** On Major Highways, the minimum intersection spacing shall be 600 feet. The design speed shall be 40 mph. Full access to adjoining property shall be avoided and shall exceed the following minimum separation distances (in all cases, distances shall be measured between the curb returns):

- more than 250 feet on the approach leg to a full turn intersection;
- more than 150 feet on the exit leg from a full turn intersection;
- more than 250 feet between driveways.

All access configurations shall be subject to City Engineer review and approval.
**Responsible Agency:** Public Works, Planning, City Engineer, Planning Commission, City Council
**Schedule:** Immediately; Ongoing

**Program 6.D:** On Collectors, the minimum intersection spacing shall be 300 feet. The design speed shall be 30 mph. Access driveways shall exceed the following minimum separation distances (in all cases, distances shall be measured between the curb returns):

- more than 250 feet on the approach leg to a full turn intersection;
- more than 150 feet on the exit leg from a full turn intersection;
- more than 250 feet between driveways.

All access configurations shall be subject to City Engineer review and approval.
**Responsible Agency:** Public Works, Planning, City Engineer, Planning Commission, City Council
**Schedule:** Immediately; Ongoing

**Policy 7:** The City shall periodically review and update its transportation system Capital Improvement Program to ensure that it keeps pace with the need for network improvements that continue to provide an acceptable level of service and a safe and efficient system.

**Program 7.A:** Based on biennial monitoring of the roadway network, maintain a transportation Capital Improvement Program (CIP) that sets forth timelines for the construction of new roadway, bike and LSEV lanes and paths, and other transportation infrastructure in the community. The program shall plan in five-year increments.
**Responsible Agency:** Public Works, City Engineer, Planning Commission, City Council
**Schedule:** Immediately; Every two years

**Program 7.B:** Based on annual monitoring of the roadway network, establish and maintain a roadway pavement management program (PMP) that sets forth timelines and schedules for the maintenance of existing roads in the community. The program shall establish funding levels each fiscal year.
**Responsible Agency:** Public Works, City Engineer, Planning Commission, City Council
**Schedule:** Immediately; Annually

**Program 7.C:** On Local streets, the minimum intersection spacing shall be 250 feet. The design speed shall be 25 mph. All access configurations shall be subject to City Engineer review and approval.
**Responsible Agency:** Public Works, Planning, City Engineer
**Schedule:** Immediately; Ongoing

**Program 7.D:** Within subdivisions, private streets may be designed to provide a reduced minimum paved width of 28 feet with no on-street or restricted on-street parking, subject to City Engineer and Fire Department approval, and in consideration of other improvements that encourage pedestrian, bicycle and LSEV use.
**Responsible Agency:** Public Works, Planning, City Engineer
**Schedule:** Immediately; Ongoing

**Policy 8:** The implementation of this element may require flexibility in applying and adapting roadway design standards and specifications, therefore, the Public Works Director is authorized to make consistency findings to permit modifications that do not compromise the operational capacity of the subject roadway or intersection.

> **Program 8.A:** The City shall maintain a liaison with adjoining cities, Caltrans, CVAG, Riverside County planning and engineering staffs to study and implement effective means of preserving and improving capacity along major roadways serving inter-city traffic. Strategies shall include but are not limited to synchronized signalization and other improvements to major roadways and intersections.
> **Responsible Agency:** Public Works, Planning, City Engineer, CVAG TAC
> **Schedule:** Immediately; Ongoing

**Policy 9:** The City shall facilitate the design, installation and maintenance of a community locational/directional sign program to efficiently direct traffic to high use areas, including the downtown/civic center, parks, golf courses, Palm Springs International Airport, and other facilities and major attractions and destinations in and around the City.

**Policy 10:** The City shall coordinate and cooperate with the Palm Springs Airport Commission and the Riverside County Airport Land Use Commission to assure that the Palm Springs International Airport continues to meet the City's existing and future transportation, commercial and emergency response needs.

**Policy 11:** On an ongoing basis, the City shall confer and coordinate with the SunLine Transit Agency on the expansion of routes, facilities, services and ridership especially in congested areas and those with high levels of employment and commercial services, and encourage the use of most energy efficient and least polluting transportation technologies.

> **Program 11.A:** When initiating review of development proposals, the City shall consult and coordinate with SunLine and solicit comments and suggestions on bus stops and other public transit facilities and design concepts, including enhanced handicapped access, should be integrated into project designs.
> **Responsible Agency:** Public Works, Planning, City Engineer
> **Schedule:** Immediately; Ongoing