



Avenue Q Feasibility Study

October 2016



Prepared for the
City of Palmdale by

DYETT & BHATIA
Urban and Regional Planners



MIA LEHRER + ASSOCIATES
LANDSCAPE ARCHITECTURE

Primary Funding from



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Executive Summary

The purpose of the Avenue Q Feasibility Study is to determine whether or not Avenue Q could be successful as a transit-oriented development (TOD), mixed use corridor. Avenue Q is of particular interest because it provides a direct route to the proposed location of Palmdale's future High Speed Rail multimodal station (Palmdale Station). In addition to this Feasibility Study, the City of Palmdale is also currently undertaking two distinct planning efforts, the TOD Overlay Zone Project, and the Station Area Plan, to plan for the area surrounding the station.

The Avenue Q Study Area focuses on the corridor surrounding West Avenue Q, generally located between Auto Center Drive and Palmdale Boulevard and between the westerly terminus of Avenue Q and Division Street. A map of the Study Area is shown in Figure 1.1-2.

Conclusions

Transit-oriented development along Avenue Q will create a natural extension of the TOD planned for the area surrounding the future multimodal station. In the context of anticipated high-capacity transit and the likely resulting demand for higher-density housing options and entertainment areas, transit-oriented development is feasible and recommended for the Avenue Q corridor. Avenue Q should develop as an active, mixed-use, multi-modal transportation corridor that links major destinations and employment areas with Palmdale Station.

SUMMARY OF RECOMMENDATIONS

Key recommendations from the Avenue Q Feasibility Study are summarized below.

- Foster Transit-Oriented Development (TOD) along and around Avenue Q that increases development within walking and biking distance of transit, jobs, restaurants, nightlife, entertainment, and shopping to support affordable, healthy, and sustainable lifestyles.
- Facilitate the development of mixed-use buildings on Avenue Q with active, sidewalk-oriented uses on the ground floor and apartments and condominiums above.
- Build complete, attractive, safe, and multi-modal streets that provide for the needs of diverse members of the community, promote physical activity, and support environmental sustainability.
- Redesign Avenue Q as a transit corridor that serves as a link to Palmdale Station and regional destinations.
- Allow for a well-connected pedestrian and bicycle network with safe and pleasant routes for walkers and cyclists of all ages to easily move about.
- Manage, price, and set requirements for parking to:
 - Maximize transit, cycling and walking trips, while minimizing motor vehicle trips;
 - Increase social equity and housing affordability by charging separately for parking; and
 - Minimize paved surfaces and their associated environmental costs (e.g., heat island effects, air and water pollution, and storm water runoff).

- Promote the use of structured parking garages, underground parking and surface lots located behind buildings, so as not to detract from a pedestrian-oriented streetscape. Where appropriate, permit shared parking for adjacent uses with different operating hours.
- Improve transportation choices and minimize congestion through the development of Transportation Demand Management (TDM) programs.
- Utilize unified design standards for sidewalks, parkways, curbs, street trees, landscaping and amenities.
- Incorporate parks and community gathering spaces that are engaging, comfortable, visually attractive, and accessible to all.
- Design with local and climate-appropriate plant materials and incorporate water conservation strategies to reflect the character and ecology of the area.

Implementation

Implementation of the recommendations in the Avenue Q Feasibility Study will require changes to the City’s General Plan, Zoning Ordinance, and two Specific Plans – the Antelope Valley Auto Center Specific Plan (AVACSP) and the Palmdale Trade and Commerce Center Specific Plan (PTCCSP). As a result, suggested revisions to each of these planning documents are included where applicable throughout this report. Amendments and revisions to the General Plan, Zoning Ordinance, and Specific Plans will ultimately be accomplished through Planning Commission and City Council action.

Report Organization

The Avenue Q Feasibility Study is composed of three parts that work together to present a unified plan for transit-oriented development in the Study Area.

- **Part 1: Land Use Framework Plan.** Provides a Land Use Plan, classifications, development and use standards, and land use policy direction for the Study Area.
- **Part 2: Transportation Report.** Provides a Circulation Plan and policy recommendations for the thoroughfare network, all modes of transportation, airport access, parking, and Transportation Demand Management.
- **Part 3: Urban Design, Street, and Streetscape Recommendations Report.** Provides policy recommendations for streetscape and open space development.

Part I: Land Use Framework Plan

I.1 Introduction



This Land Use Framework Plan is intended to help the City of Palmdale carry out the vision of Transit-Oriented Development (TOD) along Avenue Q.

Photo I.1-1: Transit-oriented development.

1.1.1 Purpose of the Land Use Framework Plan

The Land Use Framework Plan for the Palmdale Avenue Q Feasibility Study will serve to guide future development and public investments of the Study Area. The Plan provides policy direction and identifies General Plan, Zoning Ordinance, Antelope Valley Auto Center Specific Plan (AVACSP) and Palmdale Trade and Commerce Center Specific Plan (PTCCSP) amendments needed to carry out the vision of Transit-Oriented Development (TOD) along Avenue Q. The Land Use Framework Plan will work together with the Transportation Report and the Urban Design, Street and Streetscape Recommendations reports to guide public improvements and private development in the Study Area.

AVENUE Q STUDY AREA

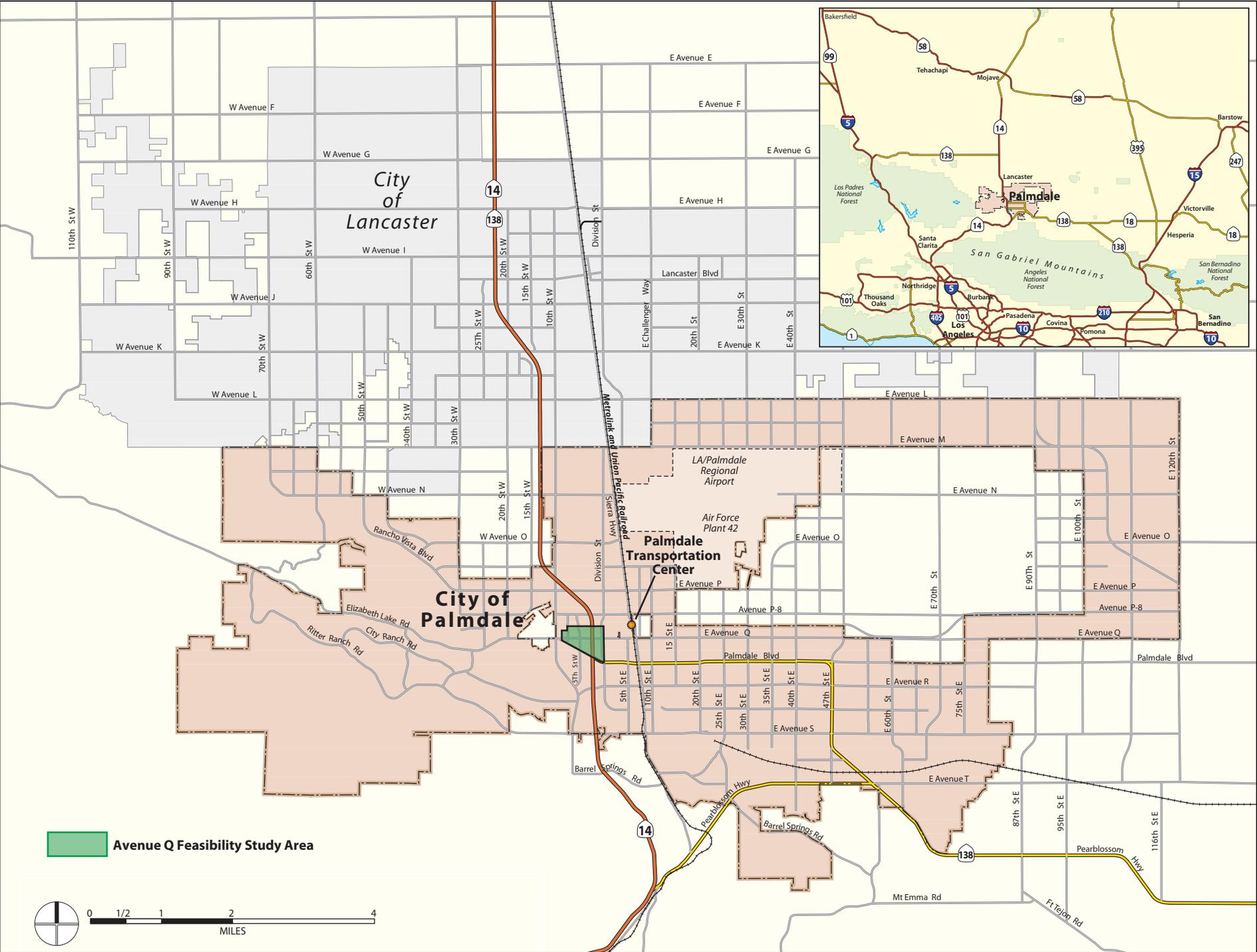
The City of Palmdale is situated in northern Los Angeles County, across the San Gabriel Mountains from Los Angeles. Palmdale and Lancaster, its neighbor to the north, are the principal cities in the Antelope Valley and the High Desert. The Study Area's regional context is shown in Figure 1.1-1.

Within Palmdale, the Study Area focuses on the corridor surrounding West Avenue Q. It is generally located between Auto Center Drive and Palmdale Boulevard and between the westerly terminus of Avenue Q and Division Street. The eastern boundary of the Study Area is located about a quarter mile from the PTC while the western boundary is approximately 1.5 miles from the PTC.

The Study Area is largely composed of vacant land, with some pockets of commercial and light industrial uses. It overlaps with two existing specific plans, the Antelope Valley Auto Center Specific Plan and the Palmdale Trade and Commerce Center Specific Plan. A map of the Study Area is shown in Figure 1.1-2.

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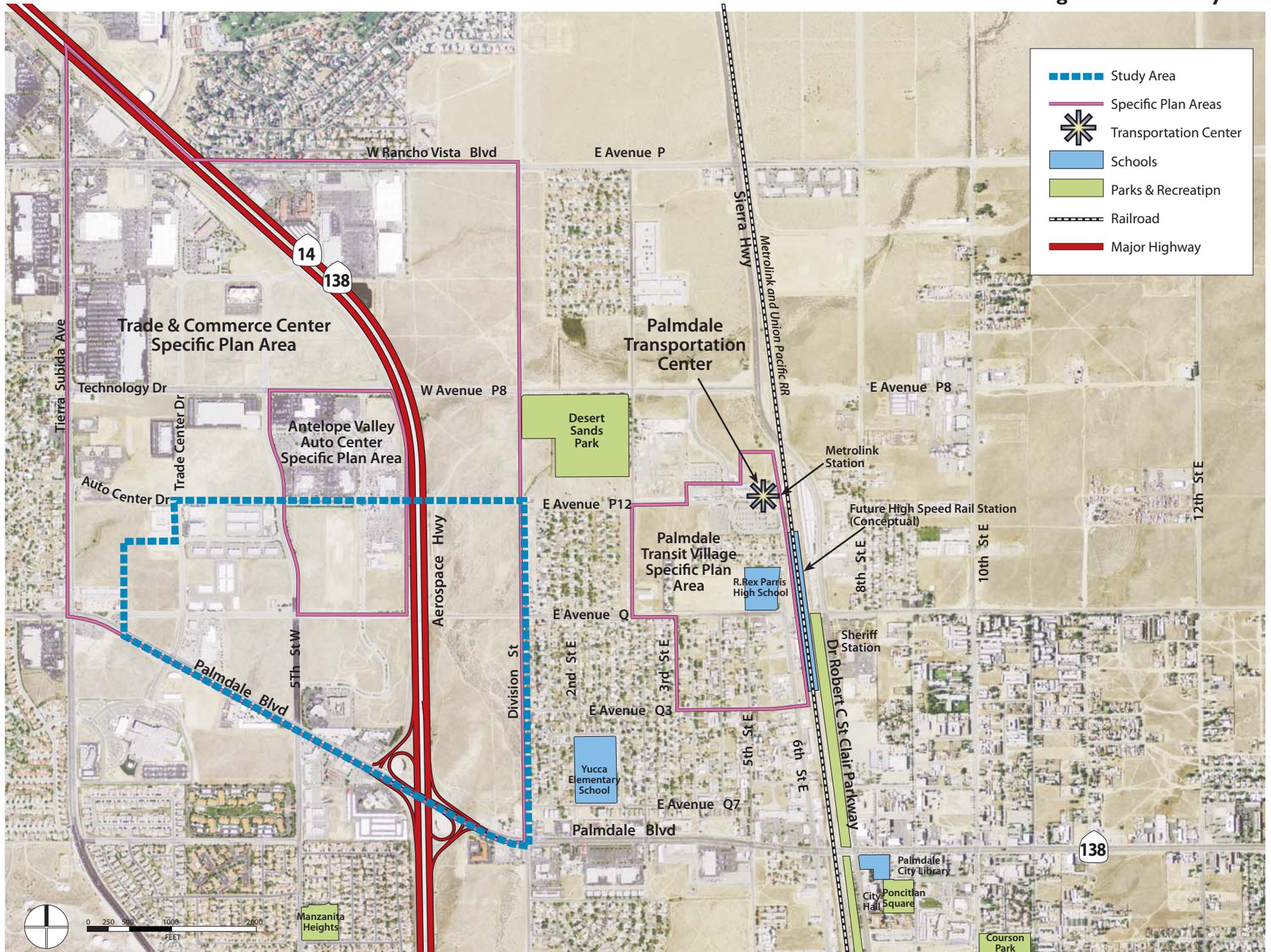
Figure I.1-1: Regional Context



 Avenue Q Feasibility Study Area



Figure I.1-2: Study Area



1.1.2 Summary of Recommendations

This section presents the Avenue Q Land Use Framework Plan's key recommendations. The recommendations describe a development pattern that would support the future Multimodal Station and enhance sustainability and quality of life in Palmdale. These recommendations are repeated as Guiding Policies in Chapter 1.3. Figure 1.1-3 illustrates the vision for the Avenue Q Study Area.

OVERALL VISION AND LAND USE PATTERN

- Plan Avenue Q as a multi-modal transportation corridor linking major destinations and employment areas with the future Palmdale Multimodal Station.
- Foster Transit-Oriented Development (TOD) and supportive public improvements along and around Avenue Q that increase development within walking and biking distance of transit, jobs, and shopping to support affordable, healthy and sustainable lifestyles.
- Foster a complete community that is attractive to young professionals, families with children, and others to stimulate economic development.
- Provide a positive vision for Palmdale, and continue to engage business owners, property owners and other stakeholders in planning for future development.
- Allow for a well connected pedestrian and bicycle network with safe and pleasant routes for walkers and cyclists of all ages to easily move about the Study Area.
- Provide adequate infrastructure to support future development. This could include upgrades to potable water conveyance facilities, the sewage system,

stormwater management facilities, and power and/or gas infrastructure.

TRANSIT CORRIDORS AND TRANSIT NEIGHBORHOODS

- Along Avenue Q, facilitate the development of mixed use buildings with active, sidewalk-oriented uses on the ground floor and apartments and condominiums above. Avenue Q itself will be redesigned as a Transit Corridor with wide sidewalks, climate appropriate landscaping, and pedestrian amenities, providing a link between the future Multimodal Station and regional destinations.
- Facilitate the development of a lively transit village that features four- to five-story residential buildings with ground-floor commercial uses, as well as new streets, enhanced streetscapes, and parks.
- Foster a vibrant entertainment district along Avenue Q, featuring restaurants, entertainment venues, nightlife, and other attractions that are lacking in Palmdale today.
- Restrict medical offices and residential uses from occurring in the same mixed use building to protect patient privacy and reduce the likelihood of incompatibility issues. Facilitate the development of mixed use buildings with retail on the ground floor and offices above as an appropriate setting for medical office uses.
- Provide well-lit parking options within a short walk of new restaurants, bars, shops and entertainment venues. Promote the use of structured garages, underground parking and surface lots located behind buildings, so as

not to detract from a pedestrian-oriented streetscape. Where appropriate, permit shared parking for adjacent uses with different operating hours.

NEW TRANSIT-ORIENTED RESIDENTIAL NEIGHBORHOODS, PARKS, AND PUBLIC FACILITIES

- Develop new walkable, transit-oriented residential neighborhoods, including 4- and 5-story condominiums and apartments, courtyard apartments, and townhouses. These new neighborhoods would take shape south of Avenue Q to the west of State Route (SR) 14 and north of Avenue Q between SR-14 and Division Street.
- Incorporate parks and community gathering spaces to improve the area’s appearance and create recreational, social, and educational opportunities.

PALMDALE BOULEVARD

- Facilitate development of new shopping centers, offices, hotels, and related uses at locations with high visibility and access along Palmdale Boulevard. Future commercial development along the corridor should contribute to a positive image for the city, and provide a full range of convenient shopping and services for new area residents.
- Facilitate development that incorporates medical office uses along Palmdale Boulevard to take advantage of proximity to the Palmdale Regional Medical Center.

AUTO CENTER AND INDUSTRIAL AREA

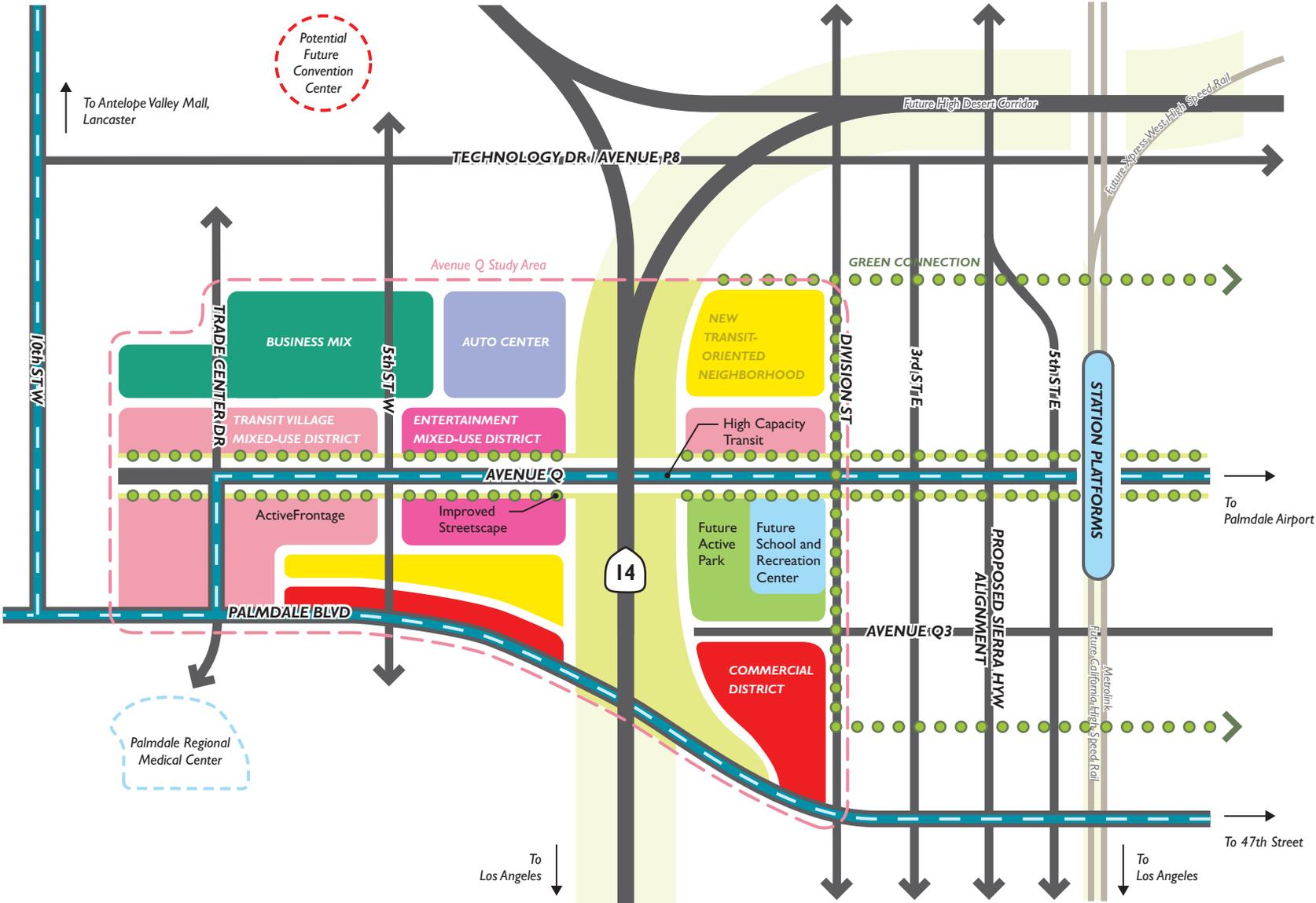
- Continue to provide for development of light industrial, office, research and development, and similar uses in the area north of Avenue Q between the Antelope Valley Auto Center and Trade Center Drive, following the guidance of the Palmdale Trade and Commerce Center Specific Plan.
- Continue to provide for development of automobile dealerships following the guidance of the Antelope Valley Auto Center Specific Plan.

PLAN OBJECTIVES

The Land Use Framework Plan aims to accomplish the following objectives:

- Create TOD and supportive streets and public spaces along the Avenue Q corridor, connecting people with the Palmdale Transportation Center (PTC) and the city’s future High Speed Rail station.
- Increase development within walking and biking distance of transit, jobs, and shopping to support affordable, healthy and sustainable lifestyles.
- Remove regulatory constraints to TOD by identifying necessary amendments to the General Plan, Zoning Ordinance, AVACSP and PTCCSP.

Figure I.1-3: Palmdale Transit-Oriented Development Concept Diagram



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1.1.3 Planning Process

The City of Palmdale, in partnership with the Dyett & Bhatia consulting team, led the planning process for the Avenue Q Feasibility Study.

BACKGROUND RESEARCH

The planning process began with research of existing conditions through field visits and evaluation of relevant planning documents. Stakeholders were interviewed to gain an understanding of the key issues for the Study Area. The Summary of Stakeholder Interviews reviews the major topics and information gathered during these interviews. The Existing Conditions and Site Analysis Report summarizes the collective results of the fieldwork, background research, and stakeholder interviews. Both reports are detailed further in Chapter 1.2.

TRANSIT-ORIENTED DEVELOPMENT CONCEPT PLAN

The next stage of the planning process involved drafting a Transit-Oriented Development Concept Plan that explored initial concepts for land use and development; transportation and circulation; and streetscape and urban design. Discussions between City Staff and the consultant team provided feedback on the Transit-Oriented Development Concept Plan in order to refine details and diagrams before presenting to the community.

COMMUNITY WORKSHOPS

A community workshop, attended by approximately 25 people, was conducted on November 15, 2014. The purpose of this first workshop was to introduce the project to the community and present findings from the Existing Conditions and Site Analysis

Report. Comments and concerns expressed at this workshop were incorporated into the Transit-Oriented Development Concept Plan. A second community workshop, attended by approximately 80 people, was held on April 18, 2015 to garner feedback on the Transit-Oriented Development Concept Plan.

AVENUE Q PLANNING DOCUMENTS

Following the second community workshop, the Transit-Oriented Development Concept Plan is the basis for diagrams, policies, and regulatory guidance embodied in the Palmdale Avenue Q Land Use Framework Plan, the Multi-Modal Access, Circulation, and Connectivity Plan, and the Urban Design, Street and Streetscape Recommendations Plan. Together, these reports will be adopted by the City of Palmdale.

1.1.4 Plan Organization

The Palmdale Avenue Q Land Use Framework Plan is organized as follows:

Chapter 1.1: Introduction describes the purpose, process, and organization of the Land Use Framework Plan and its relationship to other planning efforts, and provides a summary of recommendations

Chapter 1.2: Background outlines the existing land use and community character of the Study Area; the General Plan, relevant Specific Plans, and current zoning; community priorities as identified by various public outreach efforts; and opportunities and constraints for Transit-Oriented Development.

Chapter 1.3: TOD Land Use Framework presents the planned land use, building heights, and active street frontages diagrams, land use classifications, and policies directing revisions to the General Plan, Specific Plans, and Zoning Ordinance, and the creation of a TOD Overlay Zone.

Appendix A provides a table showing how the proposed Land Use Framework relates to existing General Plan and Specific Plan land use designations and zoning districts.

Appendix B provides a breakdown of land use change from existing General Plan, Specific Plan, and zoning districts.

Appendix C details projected future development, and identifies the assumptions used.

1.1.5 Relationship to Other Plans

RELATIONSHIP TO THE GENERAL PLAN

State law requires that a jurisdiction’s planning implementation tools must be consistent with the adopted local general plan. As part of the implementation of the Palmdale Avenue Q Land Use Framework Plan, the City will need to amend the 1993 General Plan to ensure consistency. The land uses designations and land use maps of the General Plan will be amended to match the Avenue Q Land Use Framework Plan.

RELATIONSHIP TO SPECIFIC PLANS

The City of Palmdale adopted the Antelope Valley Auto Center Specific Plan (AVACSP) in 1989 and the Palmdale Trade and Commerce Center Specific Plan (PTCCSP) in 1990. As shown in Figure 1.1-2, portions of the AVACSP and PTCCSP overlap the

Avenue Q Study Area. Both Specific Plans will be amended to align with the designations and policies of the Avenue Q Land Use Framework Plan. The AVACSP and PTCCSP are discussed in greater detail in Chapter 1.2.

TOD OVERLAY ZONE PROJECT

In addition to the Avenue Q Feasibility Study, the City of Palmdale is also undertaking an effort to bring about Transit-Oriented Development (TOD) around the future High Speed Rail station. Like the Avenue Q Feasibility Study, this project will address regulatory constraints and necessary updates to the General Plan, Zoning Ordinance and relevant Specific Plans. The TOD Overlay Zone project has progressed in parallel with the Avenue Q Feasibility Study, with both projects sharing relevant background research and analysis. This has resulted in coordinated recommendations for both projects, ensuring that together they provide a thorough and thoughtful approach for transit-oriented development in Palmdale.

STATION AREA PLAN

California High Speed Rail is a planned high speed rail system that will connect Los Angeles and San Francisco, with potential future extensions to San Diego and Sacramento. The proposed alignment includes a station in Palmdale, just east of the Study Area. (See Figure 1.3-2 for potential station location.) This station will provide connections to Metrolink and AVTA bus service, serving as the main transit hub in Palmdale.

In partnership with California High Speed Rail, the City of Palmdale is developing a Station Area Plan that will guide the design of the Palmdale Multimodal Station and the surrounding station area (approximately a half mile radius). This planning effort will enable the City to promote economic development

and sustainability, encourage station area development and enhance multimodal access connections between the station and the City.

OTHER RELATED TRANSPORTATION PROJECTS

In addition to the projects listed above, a couple of other planned and proposed projects reflect the region's investment in improving mobility and development opportunities in Palmdale and North Los Angeles County. The High Desert Corridor (E220) is proposed to improve east-west traffic through the High Desert region. The highway would connect to SR-14, just north of the Study Area, providing a link to US-395, I-15, Bear Valley Road and SR-18. A high speed rail connection, bikeway and green energy element are also being considered as part of this project.

XpressWest High Speed Rail is a private venture that proposes a high speed passenger train connecting Victorville, California with Las Vegas, Nevada. An additional extension from Victorville to Palmdale is being considered in order to link XpressWest to California High Speed Rail and Metrolink service.

1.1.6 Implementation

Implementation of the Land Use Framework Plan will require changes to the City's General Plan, Zoning Ordinance, and two Specific Plans – the Antelope Valley Auto Center Specific Plan (AVACSP) and the Palmdale Trade and Commerce Center Specific Plan (PTCCSP). The Zoning Map and the Land Use Maps for the General Plan, AVACSP and PTCCSP need to be revised to align with the Land Use Map of this Plan (Figure 1.3-2). Suggested revisions to policies and regulations are provided in Section 1.3.5 in the form of “implementing policies.”

Amendments and revisions to the General Plan, Zoning Ordinance, and Specific Plans will ultimately be accomplished through Planning Commission and City Council action.

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I.2 Background



Photo I.2-1: Palmdale Regional Medical Center from Avenue Q Study Area

This chapter provides a baseline of existing conditions, trends, and opportunities in the City of Palmdale's Avenue Q Feasibility Study Area. It reviews the existing land use pattern, the General Plan and relevant Specific Plans, the Zoning Ordinance, and community priorities gleaned from public outreach efforts. Observed issues and potential opportunities associated with the transportation system are also discussed at the end of this section.

1.2.1 Existing Land Use and Community Character

EXISTING LAND USE

At present, the Avenue Q Study Area is largely vacant land with a few pockets of commercial and industrial uses. A regional serving auto mall is located on the west side of SR-14 just north of Avenue Q. The commercial nature of Palmdale Boulevard is reflected by two shopping centers and three hotels. The existing pattern of land uses within the Study Area is shown in Figure 1.2-1.

Photo 1.2-2:
Regional serving
Auto Mall



Photo 1.2-3:
Hotel on West
Park Drive



COMMUNITY CHARACTER

Most development in the Study Area and the surrounding area is non-contiguous and predominantly single-story, creating a low, spread-out character that is typical of communities in the High Desert. Buildings are generally set back from the street with landscaping or surface parking along the street frontage. Vacant and underutilized parcels along key corridors, such as Palmdale Boulevard and Avenue Q, create gaps in development. Although they vary in size and shape, most blocks and parcels are large. SR-14 serves as a distinct boundary that divides the Study Area and limits east-west movement.

Several activity nodes located in and around the Study Area draw Palmdale residents and regional visitors. These nodes include the Palmdale Regional Medical Center, Antelope Valley Mall and PTC.

1.2.2 General Plan, Specific Plans and Zoning

PALMDALE GENERAL PLAN

Adopted in 1993, the Palmdale General Plan provides goals, policies, and programs for future growth and development in the City. All land in the Study Area is designated as part of the Palmdale Trade and Commerce Center Specific Plan (PTCCSP) or the Antelope Valley Auto Center Specific Plan (AVACSP). General Plan land use designations within the Study Area are shown in Figure 1.2-2.

**Figure I.2-1:
Existing Land Use**

- General Commercial
- Office Commercial
- Service Commercial
- Industrial
- Vacant

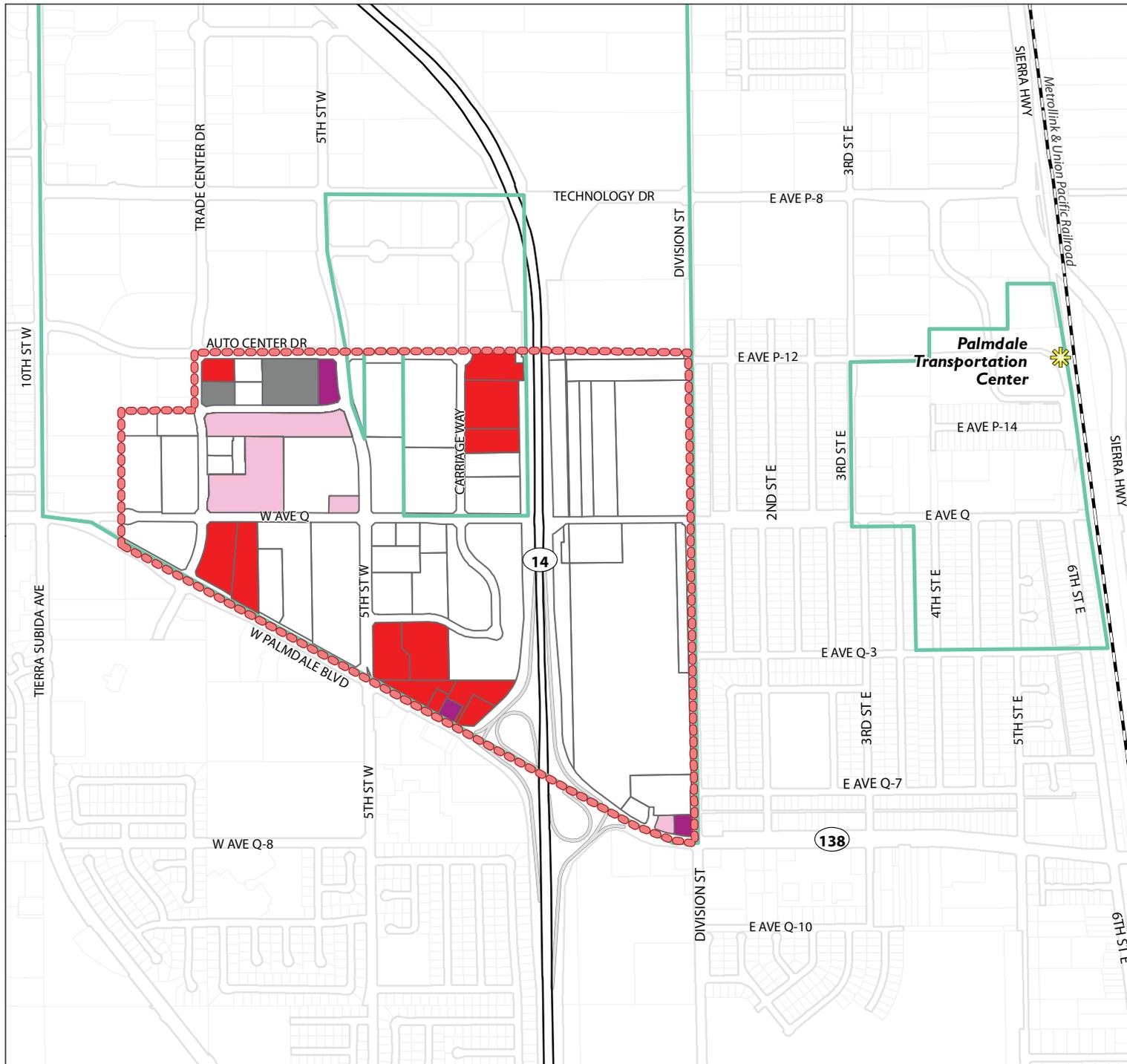
- Study Area
- Specific Plans

Source: Dyett and Bhatia, 2014

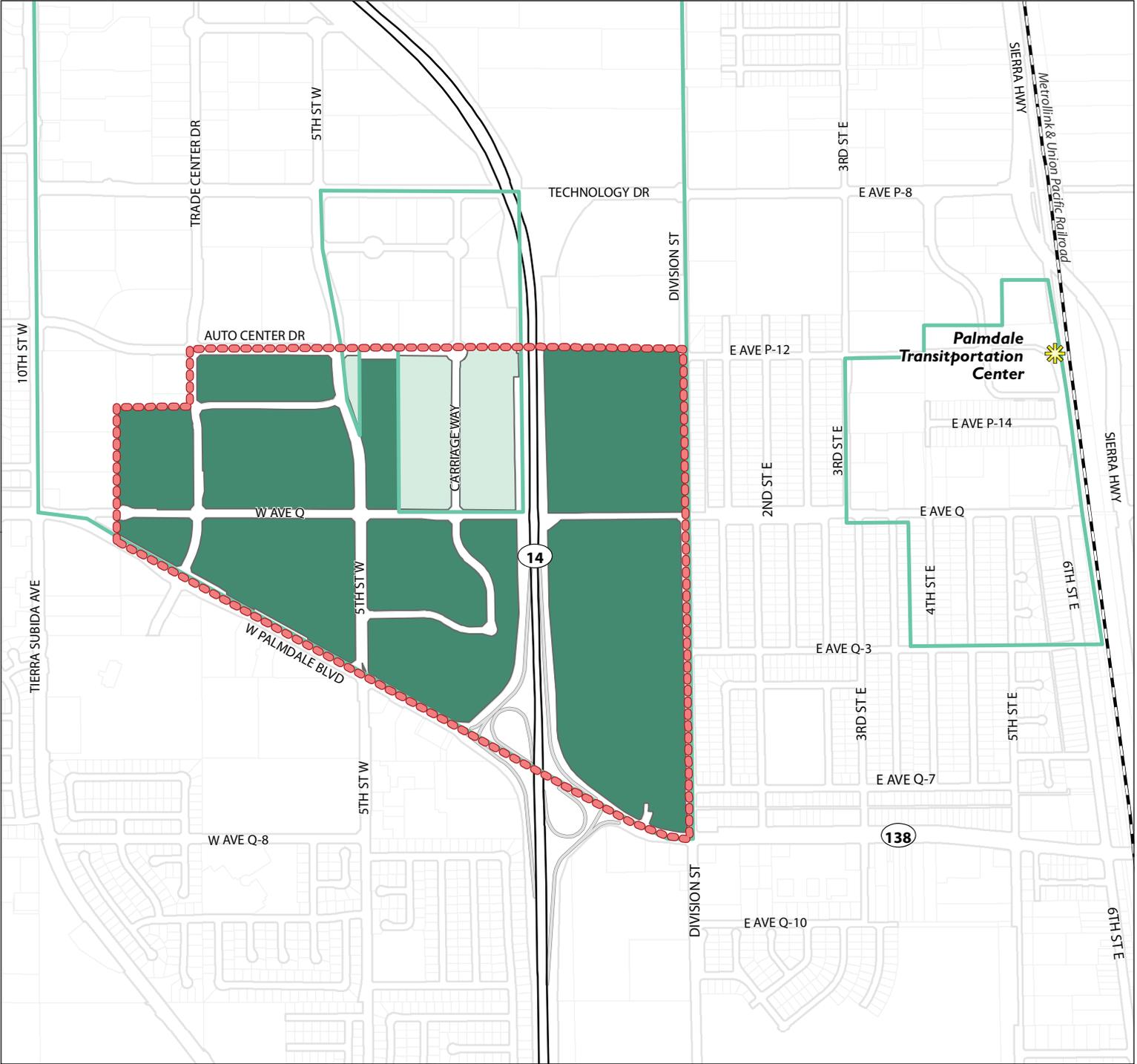
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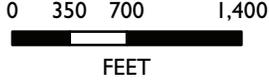
**Figure 1.2-2:
Existing General Plan
Land Use**



- Antelope Valley Auto Center Specific Plan
- Palmdale Trade and Commerce Center Specific Plan

- Study Area
- Specific Plans

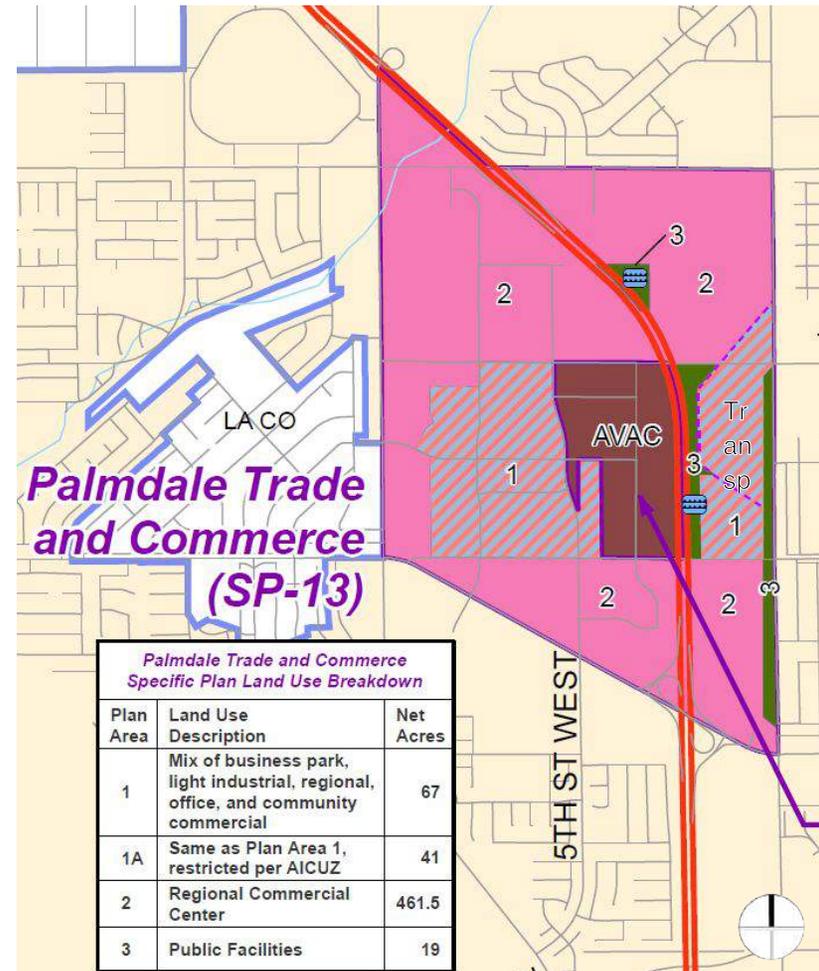
Source: City of Palmdale, 2014



PALMDALE TRADE AND COMMERCE CENTER SPECIFIC PLAN

As shown in Figure 1.2-2, the Palmdale Trade and Commerce Center Specific Plan Area is generally located between Rancho Vista Boulevard (Avenue P) and Palmdale Boulevard (SR-138) and between 10th Street West and Division Street, encompassing all of the Study Area (except the AVACSP) and extending to the north and west. The plan intends to create a diversified employment center in central Palmdale, reducing the number of residents needing to commute outside of the City for work. It was originally drafted in response to the City’s population surge in the late 1980’s during which growth in the residential sector was significantly greater than growth in the commercial and industrial sectors. For this reason, no residential uses are currently permitted within the PTCCSP. The land use map for the PTCCSP area is shown in Figure 1.2-3.

Figure 1.2-3: Palmdale Trade and Commerce Center Specific Plan



Source: City of Palmdale.

ANTELOPE VALLEY AUTO CENTER SPECIFIC PLAN

The Antelope Valley Auto Center Specific Plan Area is generally located between Technology Drive and Avenue Q and between 5th Street West and SR-14. As shown in Figure 1.2-2, the southern half of the Specific Plan area is located within the Avenue Q Study Area. The AVACSP supported the construction of the Antelope Valley Auto Center, a retail automotive sales and leasing center that can accommodate several auto dealerships. The additional tax revenues generated from the auto dealerships are intended to help finance infrastructure and public services for the City.

PALMDALE ZONING ORDINANCE

The Zoning Ordinance is a regulatory tool used to implement the goals, objectives, and policies of the General Plan as they pertain to development. Palmdale’s zoning districts are organized by land use, and are consistent with General Plan land designations. As shown in Figure 1.2-2, the entire Study Area is zoned within the abovementioned specific plan districts, which are allowed to include commercial and industrial uses. The southern edge of the Study Area is part of the commercially-zoned Palmdale Boulevard corridor. Surrounding the Study Area there are largely single-family residential zoning districts to the south and west, extensions of the PTCCSP and AVACSP to the north, and a mix of residential, commercial and industrial zones to the west.

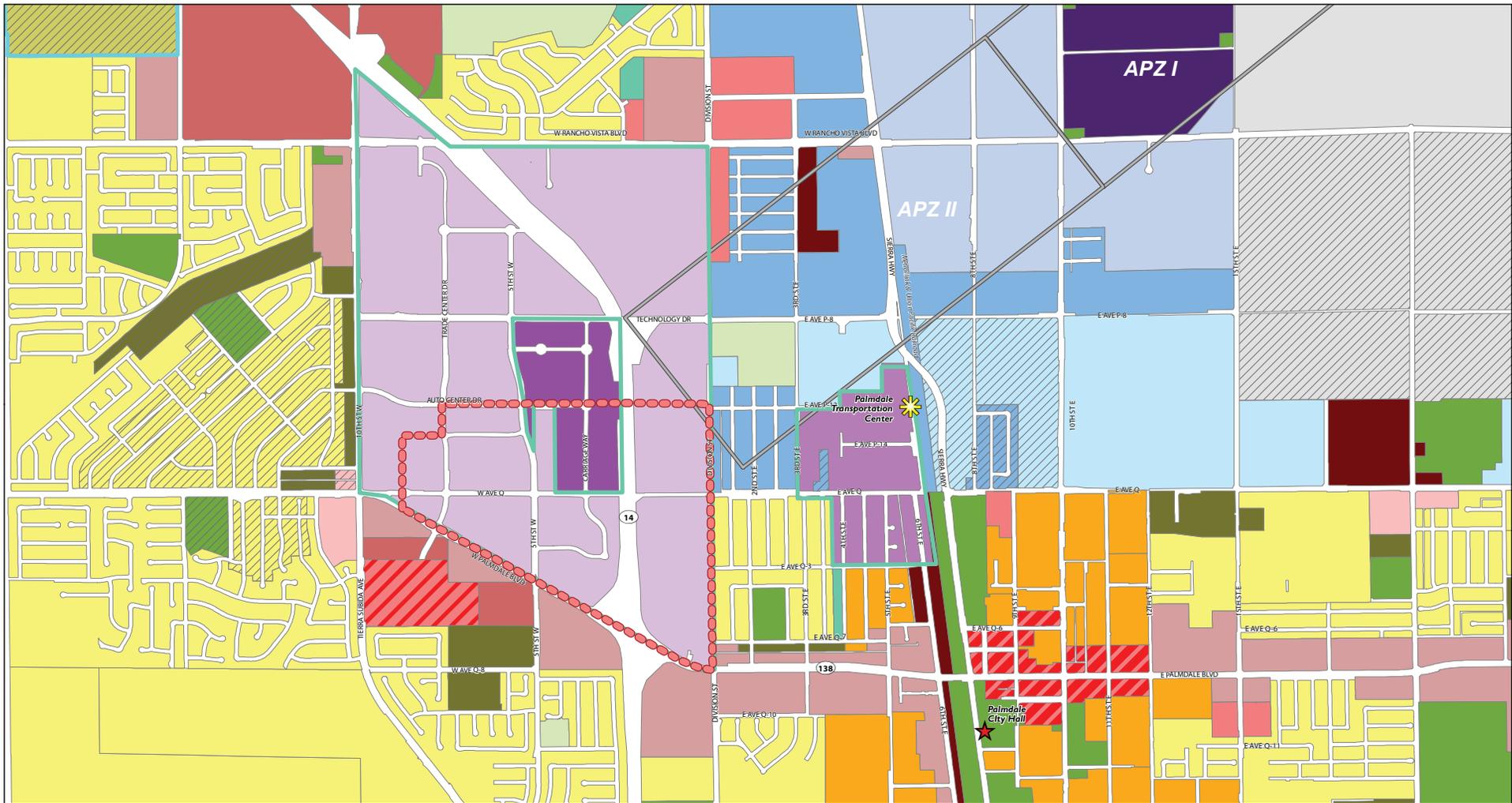
1.2.3 Community Priorities

In order to ascertain the community’s vision and priorities for the Study Area, public outreach was conducted in the form of stakeholder interviews and community workshops. The results of each are briefly outlined below.

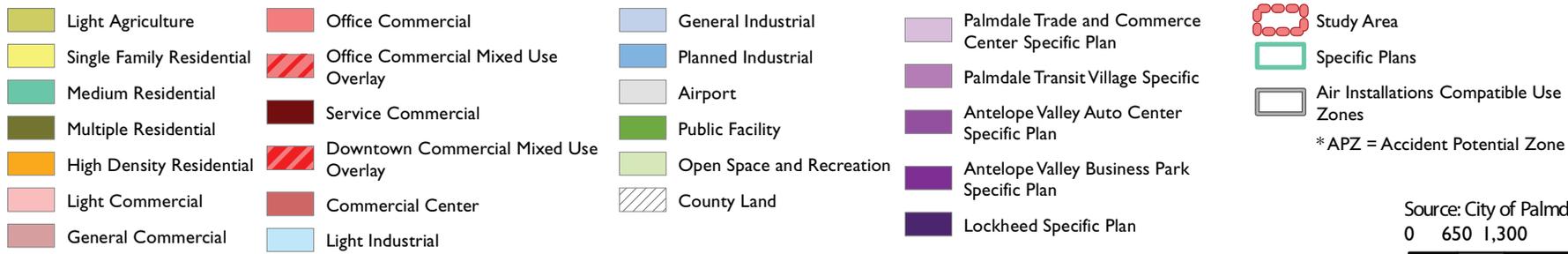
STAKEHOLDER INTERVIEWS

The planning team conducted individual and small group interviews with 19 stakeholders to determine their thoughts on Palmdale’s assets and challenges, future development patterns, and big-picture circulation issues. Stakeholders included local business owners; property owners; real estate brokers; representatives of community organizations and advocacy groups; representatives from City agencies; and political representatives.

Several key themes emerged during these interviews that helped to guide the planning efforts. Stakeholders supported the City’s goals of bringing about new, higher-intensity, and mixed-use development associated with a future High Speed Rail station, and they felt the larger community would also be supportive if the City reached out to inform and inspire. People spoke of the potential for upscale multifamily housing, entertainment uses, and neighborhood gathering places to find a foothold in Palmdale, and make the city a better place to live. Generally, the Avenue Q Study Area was seen a blank slate, with poor visibility and access, but with potential as a transit link and TOD area.



**Figure 1.2-4:
Existing Zoning**



Source: City of Palmdale, 2014
 0 650 1,300 2,600
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COMMUNITY WORKSHOPS

Two community workshops were held to gather input at critical stages of the planning process. The first workshop, held on November 15, 2014, was focused on introducing the project to the community and sharing findings from the existing conditions analysis. Community members who came to the workshop provided valuable feedback on what they envisioned for the Study Area, and what their concerns were. Many wanted to see pedestrian-oriented mixed-use development, tall buildings, shops, restaurants, nightlife, entertainment, cultural attractions, upper-level apartments and condos, and a modern appearance. Some suggested that parking should be consolidated in centralized garages or underground, to support a dense, walkable environment. Others emphasized the importance of parks and community gathering spaces to improve the area's appearance and create recreational, social and educational opportunities.

The second workshop was held on April 18, 2015 with the goal of gathering community reaction to initial concepts for land use, circulation and streetscape in the Study Area. Workshop participants were generally supportive of the concepts presented, with many expressing excitement about creating a real city center in the middle of Palmdale. Workshop participants also called for safe routes for pedestrians and cyclists and climate-appropriate landscaping throughout the Study Area.

Photo 1.2-4:
Workshops featured presentations with project updates to keep community members informed and actively involved in the planning process.



Photo 1.2-5: At both community workshops, participants were given the opportunity to interact directly with the planning team to ask questions, provide feedback and present new ideas.

1.2.4 Opportunities and Constraints for Transit-Oriented Development

OPPORTUNITIES

Opportunity sites are identified as those sites that may have potential for land use or intensity change over the long term. Sites may currently be vacant, underutilized or in a significant location. As discussed above, the Study Area contains a significant amount of vacant land, which presents the opportunity for new development that does not displace existing residents or businesses. As shown in Figure 1.2-5, there are 90 vacant parcels in the Study Area, many of them large, covering a total of approximately 190 acres.

Beyond vacant land, Figure 1.2-5 also shows “underutilized sites” and other potential change areas within the Study Area. This category is identified to get a sense of which parcels may be most likely to undergo change during the planning period. Underutilized land is typically defined as sites on which the assessed value of existing permanent improvements (buildings) is less than the assessed value of the land. For parcels in significant locations (along or in close proximity to the Avenue Q corridor), a higher assessed value ratio was used to identify underutilized sites. For these areas, parcels with an assessed value ratio of up to 2.0 were identified (meaning buildings on a site have up to twice the assessed value of the land itself). In addition, Figure 1.2-5 highlights all land in these significant locations as having the highest potential to redevelop with new land use and zoning regulations.

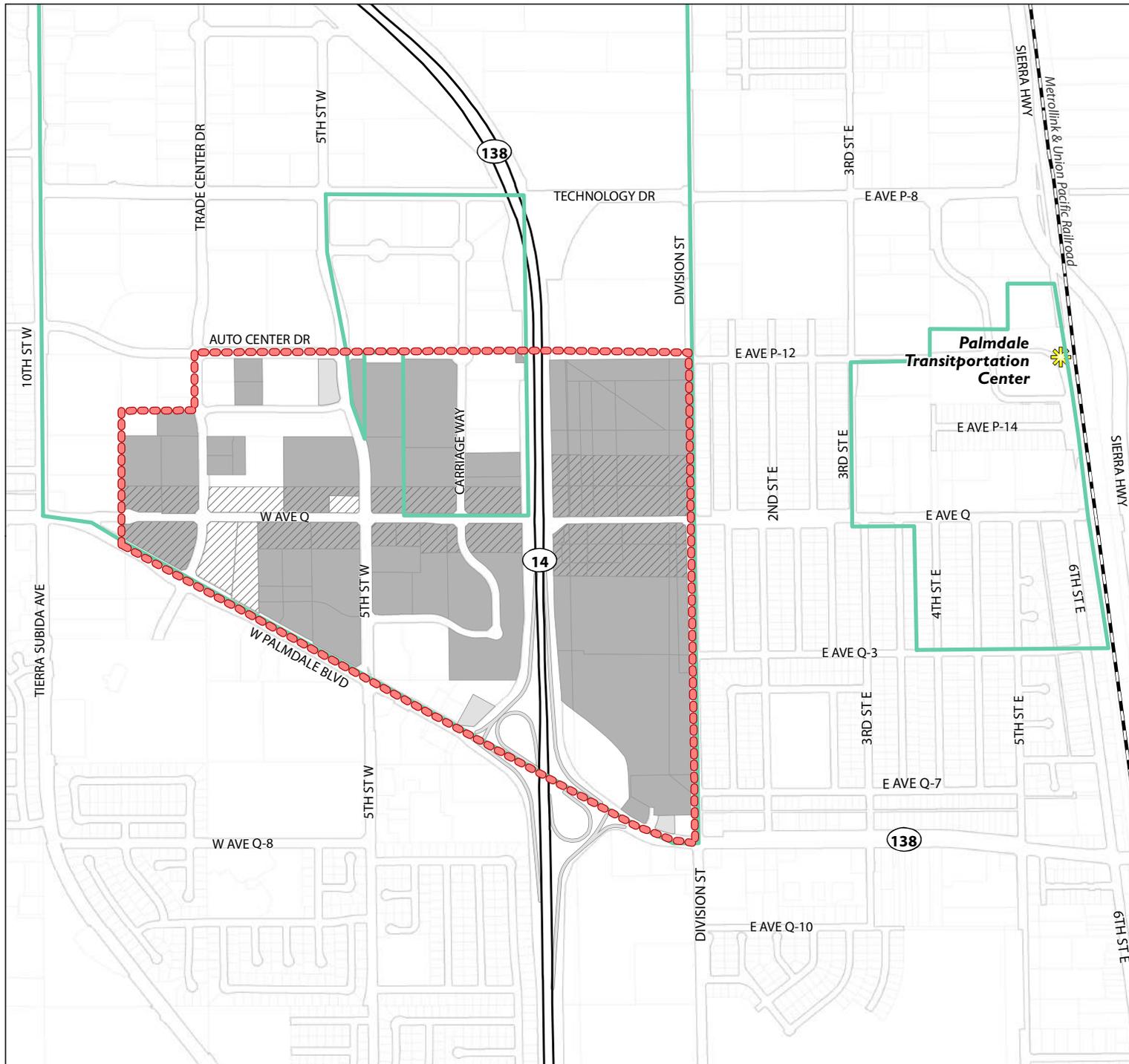
CONSTRAINTS

There are some important factors that limit the development potential of several of the Study Area’s vacant and underutilized sites. Proximity to SR-14 presents a development constraint, as the freeway creates a barrier to east-west movement that hinders the area’s ability to maximize optimal TOD strategies. It also raises noise and air quality concerns for potential residential development that would be located in close proximity. Additionally, commercial and employment uses along Avenue Q have been further hampered by poor access routes and a lack of visibility from the freeway. Finally, infrastructure will need to be significantly improved to accommodate future development.



Photo 1.2-6: The Study Area’s considerable amount of vacant land offers significant development potential.

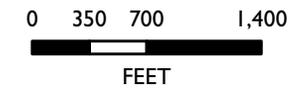
**Figure I.2-5:
Potential Change Areas**



- Vacant Lot
- Underutilized Site
- Avenue Q Corridor

- Study Area
- Specific Plans

Source: City of Palmdale, 2014



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I.3 Land Use Framework



Photo I.3-1: Transit-oriented development

This chapter presents the planned land use diagram, land use classifications, and policies for the realization of transit-oriented development and supportive streets and public spaces. The chapter's policies will guide the City to revise the General Plan, Specific Plans, and Zoning Ordinance, and create a TOD Overlay Zone. The chapter also features tables summarizing land use change and projected development.

1.3.1 Land Use Plan Overview

The Land Use Plan is intended to support a vibrant, pedestrian-friendly, and transit-oriented community along Avenue Q from Division Street to west of Trade Center Drive. Avenue Q is envisioned as a Transit Corridor with high-capacity transit and a comfortable pedestrian environment. More details about transportation and streetscape improvements can be found in the Transportation Report and the Urban Design, Street and Streetscape Recommendations that compliment this Land Use Framework Plan.

The highest densities and intensities of development would occur along Avenue Q itself, with a village center around Avenue Q and Trade Center Drive. New transit-oriented residential neighborhoods would be developed to the north and south. The business mix envisioned by the Palmdale Trade and Commerce Center Specific Plan (PTCCSP) and the Antelope Valley Auto Center Specific Plan (AVACSP) would be fostered north of Avenue Q and west of SR-14.

This section summarizes the intended future land use pattern in the Study Area. The Study Area would feature several distinct subareas, which are summarized below. The approximate locations of each subarea are shown in Figure 1.3-1. The Avenue Q Land Use Plan is shown in Figure 1.3-2.

SUBAREAS

Transit Village District (Area 1)

The area west of 5th Street West along Avenue Q would become a high-intensity, mixed use district featuring high-density housing and street-facing retail. This district would be the entry

point to the Avenue Q corridor from Palmdale Boulevard, and would have a direct connection to the Palmdale Regional Medical Center to the south as well as proximity to the Antelope Valley Mall to the north.

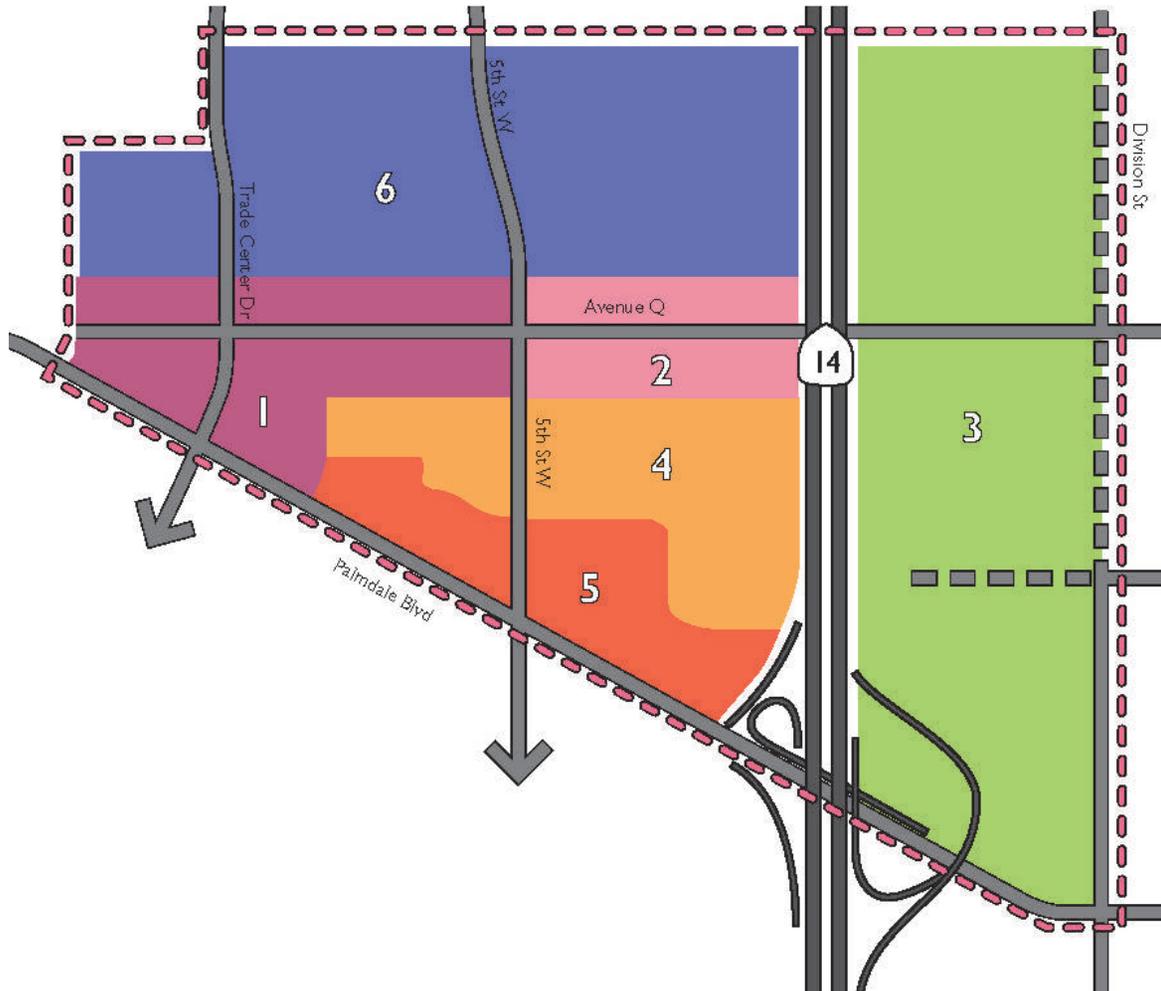
Mixed Use Entertainment District (Area 2)

The Avenue Q corridor between 5th Street West and SR-14 would become an entertainment focused mixed-use district with housing allowed on upper floors. It would become a destination drawing people from the Multimodal Station, and attracting travelers along SR-14.

East of State Route 14 (Area 3)

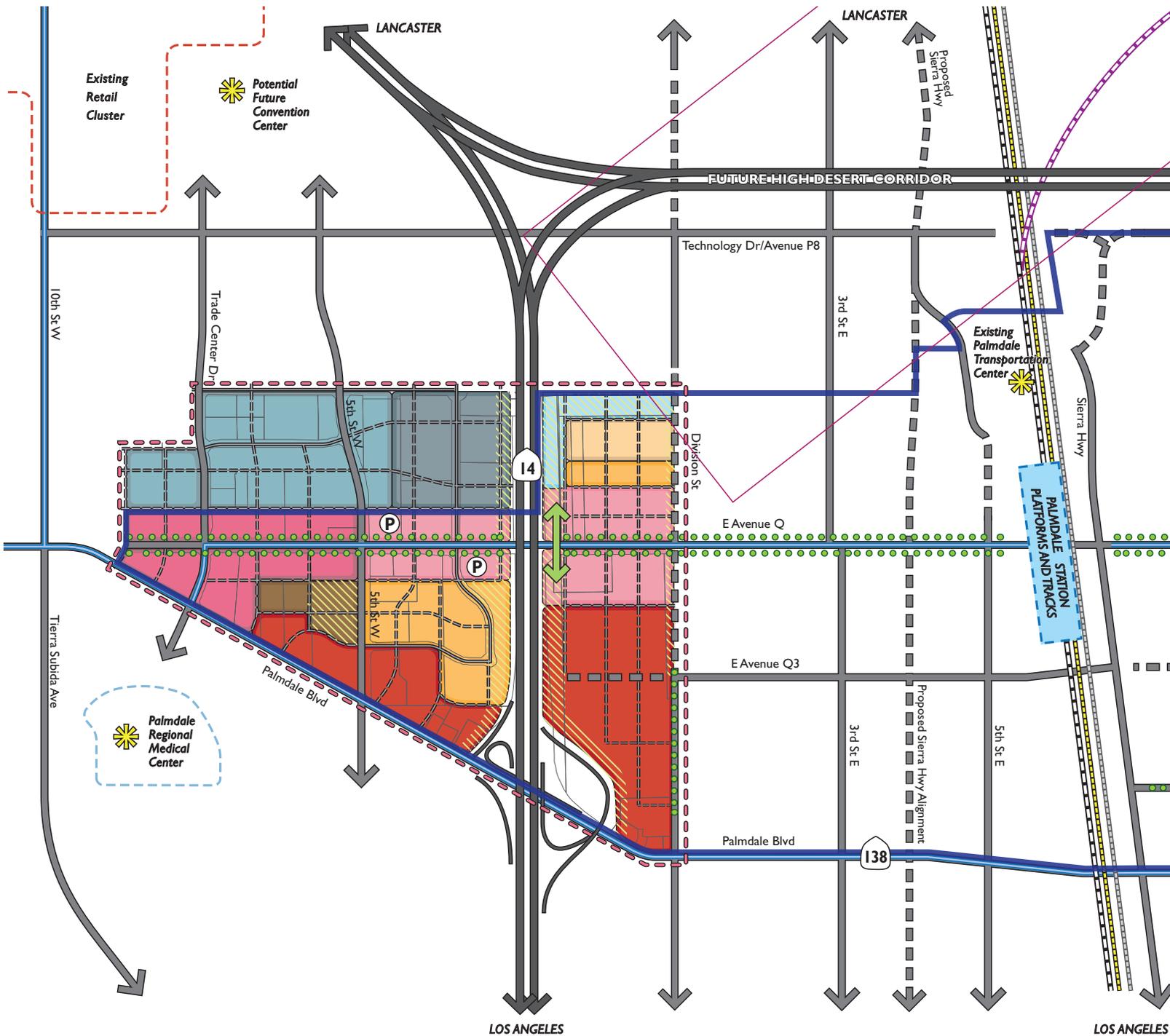
Currently undeveloped land between SR-14 and Division Street would become a new neighborhood with a mix of housing types, with a large commercial area located to the south. This area is the gateway between the Avenue Q and TOD Overlay Zone study areas, and is included in both plans.

Figure I.3-1: Avenue Q Character Districts



1. Transportation Report
2. Mixed Use Entertainment District
3. East of State Route 14
4. New Neighborhoods South of Avenue Q
5. Palmdale Boulevard
6. Business Mix and Auto Center

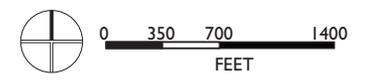
**Figure I.3-2:
Avenue Q Land Use Plan**



- Transit Village Mixed Use (TVMX) (40 - 80 du/ac; FAR: 1.0 - 3.5*)
- Transit Corridor Mixed Use (TCMX) (18 - 40 du/ac; FAR: 0.6 - 2.0*)
- High Density Residential (HDR) (30 - 60 du/ac)
- Medium-High Density Residential (MHDR) (16 - 30 du/ac)
- Medium Density Residential (MDR) (6 - 16 du/ac)
- Commercial (C) (FAR: Max. 1.0)
- Business Mix (BM) (FAR: Max. 1.0)
- Auto Center (AC) (FAR: Max. 1.0)
- Public Facility (PF) (FAR: Max. 1.0)
- Potential Future Open Space and Recreation

*Total FAR for all land uses.
Additional density/intensity allowed with bonus.

- Existing/Future(Conceptual) Major Street
- Existing/Future(Conceptual) Minor Street
- California High Speed Rail (Conceptual)
- XpressWest High Speed Rail (Conceptual)
- Metrolink Rail
- Union Pacific Railroad
- Potential Future High Capacity Transit
- Palmdale Multimodal Station Platforms and Tracks (location subject to change)
- Palmdale Multimodal Station Overlay Zone
- TOD Overlay Zone
- Landmark
- P Potential Parking Garage
- Green Connection
- New or Enhanced Pedestrian/Bike Connection
- Air Installations Compatible Use Zones: Accident Potential Zone II
- Study Area



New Neighborhoods South of Avenue Q (Area 4)

Transit-oriented residential development would take shape south of Avenue Q. Development would include 4- to 5-story condominiums and apartments in close proximity to the Transit Village, and courtyard apartments and townhouse developments in the neighborhood interior. A new neighborhood park is envisioned.

Palmdale Boulevard (Area 5)

Palmdale Boulevard would continue to provide opportunities for retail commercial, hotel and office development along Palmdale's primary corridor. Palmdale Boulevard would become a boulevard with good access not only for vehicles but for transit and pedestrians. Commercial development would be designed to address the street and enhance the image of Palmdale.

Business Mix and Auto Center (Area 6)

The area north of Avenue Q and west of SR-14 would have a mix of offices, light industrial development, and a unified auto dealership center, as planned under current specific plans. The area would have excellent roadway circulation system and streetscape improvements, as well as landscaping and outdoor amenities.

1.3.2 Land Use Structure

LAND USE CLASSIFICATIONS

The Avenue Q Land Use Plan establishes a land use classification system to describe the desired transit-oriented land use pattern. Each land use class provides specific guidance for future development within the Study Area. Density and intensity, building height, and parking and open space standards for each

land use class are summarized in Table 1.3-1. Appendix A provides a summary table comparing these land use classes to existing designations in the General Plan and Specific Plans.

Mixed Use

Transit Village Mixed Use (TVMX)

40 – 80 du/ac; FAR: 1.0 – 3.5

The Transit Village Mixed Use designation is applied around a new nucleus at Avenue Q and Trade Center Drive. It provides for mixed-use buildings of up to 5 stories. Non-residential development, including offices and retail, would have FAR of between 1.0 and 3.5. Where residential is included, development would be at a minimum density of 40 and a maximum of 80 units per acre. Buildings may have ground-floor commercial uses; active ground-floor uses would be required on specified streets (see Active Street Frontages section.) Bonus standards would allow buildings with an FAR of up to 4.0, to encourage more office development, where specified public amenities such as public plazas, streetscape and pedestrian enhancements are provided.

Transit Corridor Mixed Use (TCMX)

18 – 40 du/ac; FAR: 0.6 – 2.0

The Transit Corridor Mixed Use classification is applied along Avenue Q between 5th Street West and Division Street. It is intended for mixed-use, transit-oriented development with a high level of pedestrian activity. Active uses would be required on the ground level in future development between 5th Street West and SR-14. Apartments and condominiums would be developed on upper floors. This designation anticipates development in 4-story podium-style buildings, with active ground floor uses. New development will be allowed with

residential densities of 18 units per acre at a minimum and up to 40 units per acre, or a total FAR for residential and non-residential development between 0.6 to 2.0. Bonus standards would allow buildings up to 5 stories, residential density up to 60 units per acre, and FAR up to 2.5, where specified public amenities such as public plazas, streetscape and pedestrian enhancements are provided.



Photo 1.3-2:
Ground-floor retail units above makes for an active, vibrant community within easy walking distance of transit.

Residential

High Density Residential (HDR)

30 – 60 du/ac

This designation would accommodate 4- and 5- story podium-style condominiums and apartment complexes at densities of 30 to 60 units per acre. Buildings would be oriented to the sidewalk and designed to contribute to a walkable neighborhood environment. This designation is applied within easy walking distance of the Avenue Q Transit Village and a future neighborhood park.

Medium-High Density Residential (MHDR)

16 – 30 du/ac

This designation is intended to accommodate future development of townhouses and 3- to 4-story courtyard and podium apartments. Future development should occur at a density of 16 to 30 units per acre. The Medium-High Density Residential designation is largely applied to an area south of Avenue Q between 5th Street West and SR-14 where a new transit-oriented residential neighborhood could develop. The neighborhood would be buffered from the freeway by a broad open space corridor. In addition, this designation is also applied to the new neighborhood between SR-14 and Division Street.

Medium Density Residential (MDR)

6 – 16 du/ac

This designation is intended to provide for duplexes, townhouses, and courtyard apartments. Future development should occur in the range of 6 to 16 dwelling units per acre. The Medium Density Residential designation is applied to the future neighborhood between SR-14 and Division Street.



Photo I.3-3: High Density Residential areas feature mid-rise multi-family housing with good amenities, in 4- to 5-story buildings.



Photo I.3-4: Medium Density Residential areas feature a range of housing options, including duplexes, townhouses and courtyard apartments.

Commercial, Office, and Industrial

Commercial (C)

Maximum FAR: 1.0

This designation is intended for retail, service commercial and hotel uses along Palmdale Boulevard and the southeast portion of the Study Area. Commercial developments should maintain a strong relationship with the street, but also accommodate an auto orientation. Structured or rooftop parking is preferred. Where included, surface parking must be located to the side or rear of the lot, and should be screened by landscaped buffers or fences. The maximum permitted FAR is 1.0.

Business Mix (BM)

Maximum FAR: 1.0

The Business Mix designation is intended for low-intensity office and light industrial complexes in the portion of the PTCCSP area west of the Auto Center and north of Avenue Q. Uses may include offices, research and development, storage and distribution, and light assembly. Developments in this designation should provide a campus setting with landscaping and outdoor amenities. Buildings may rise up to 3 stories or 45 feet, with a maximum FAR of 1.0.

Photo 1.3-5:
Business Mix and Industrial uses provide employment in a lower-intensity, landscaped setting.



Auto Center (AC)

Maximum FAR: 1.0

The Auto Center designation is intended to support a retail automotive sales and leasing center than can accommodate auto dealerships. Supportive commercial uses for employees are permitted. Building intensity and building heights are governed by the building and site guidelines in the AVACSP.

Public

Public Facility (PF)

Maximum FAR: 1.0

Within the Study Area, this designation is used for land that accommodates a drainage basin along SR-14 and the northern edge of the Study Area. Future public or community uses may also be developed within other land use designation areas.



Photo 1.3-6:
A potential future park could be combined with a public recreation center and include fields for various recreational facilities.

Open Space and Recreation (OSR)

The Avenue Q Land Use Plan does not include any land designated as Open Space and Recreation. However, a network of potential future parks, public spaces, community gardens, and preserved open spaces is shown conceptually on the Avenue Q Land Use Plan and described in the Urban Design, Street and Streetscape Recommendations report. These future parks, natural areas, and buffer zones may be developed in any land use designation. The TOD Overlay Zone provides standards for the preservation of open space buffers along existing or planned freeways and between residential and industrial areas.

OVERLAY ZONE

TOD Overlay Zone

The TOD Overlay Zone is proposed to extend from the area to the east that is the focus of the Palmdale TOD Overlay Zone Land Use Framework Plan. It would cover all of the Avenue Q Feasibility Study Area except for the Auto Center and the land that would continue to be planned for a mix of business uses following the PTCCSP. The Overlay Zone will be a primary tool

in creating a walkable, transit-oriented character and a relationship to the future Palmdale Multimodal Station. The TOD Overlay Zone is shown on Figure 1.3-2. (This is different from the TOD Study Area, which is the subject of a separate but related planning effort.)

Within the TOD Overlay Zone, additional development standards would be provided to ensure that the vision and goals of this plan are carried out in future private developments and public investments. These standards would augment the standards of underlying zoning districts. New mixed use General Plan and zoning districts are also proposed to facilitate transit-oriented development.

COMPARISON TO SURROUNDING AREAS

While the Avenue Q Land Use Plan introduces higher density and intensity designations into the area, the placement of these designations is sensitive to the existing context of surrounding areas. The northern portion of the Study Area along Auto Center Drive allows office and auto center uses, which are consistent with existing zoning to the north and west. The southern edge along Palmdale Boulevard continues to be a largely commercial corridor, with the potential for more office uses in the new mixed use district directly across from the Palmdale Regional Medical Center. New land uses on the east side of SR-14 blend seamlessly with the complementary Land Use Plan for the TOD Overlay Zone Project.

1.3.3 Development and Use Standards

DENSITY AND INTENSITY STANDARDS

Table 1.3-1 sets forth density and intensity standards for each land use designation. Residential density is measured in dwelling units per acre (du/ac). Non-residential building intensity is measured as Floor Area Ratio (FAR). This is the ratio of building floor area to the total site area. For example, a building of 1.0 FAR could be a one-story building covering an entire lot; a 2-story building covering 50 percent of a lot; or a 3-story building covering one-third of a lot.

BUILDING HEIGHTS

Maximum buildings heights for each designation are also shown on Table 1.3-1. These requirements may be covered by existing or proposed underlying zoning districts. Where the TOD Overlay Zone departs from underlying districts, standards will be addressed by the Overlay Zone. Figure 1.3-3 shows maximum building heights in the Study Area. Taller buildings would be concentrated along the Avenue Q transit corridor and, in particular, within the Avenue Q Transit Village, where buildings of up to 60 feet could be developed under “bonus” provisions.

PARKING LOCATION AND USABLE OPEN SPACE

Table 1.3-1 also provides a snapshot of how parking and usable open space should be addressed within the Avenue Q Feasibility Study Area. On-site parking must be handled carefully in order to support a pedestrian-oriented environment. For mixed-use and high-density land use designations, parking would be required to be provided within the building structure,

underground, or at the rear of sites; elsewhere, screened or landscaped parking may be located at the side and rear of sites.

All districts facilitating multifamily residential development would include requirements for usable outdoor area. These requirements mirror those in the current zoning code and PTVSP, requiring shared outdoor area for building residents. For the proposed mixed-use designations, the requirements would allow for a combination of private, shared, or publicly-accessible open space.



Photo 1.3-7: Taller buildings will be concentrated along the Avenue Q transit corridor to promote the highest density closest to transit.

TABLE I.3-1: SUMMARY OF DENSITY, INTENSITY, AND DEVELOPMENT STANDARDS					
<i>TOD Land Use Framework Plan Designation</i>	<i>Typical Building Types</i>	<i>Density or Intensity (du/ac or FAR for all uses)</i>	<i>Maximum Building Height (stories, height)</i>	<i>Parking Location</i>	<i>Usable Open Space</i>
Mixed Use					
Transit Village Mixed Use (TVMX)	Podium-style or mid-rise condominiums and apartments with or without ground-floor commercial	Min. 40 du/ac Max. 80 du/ac Min. FAR: 1.0 Max. FAR: 3.5 With bonus: Up to 4.0 FAR <i>(No residential density bonus awarded for Avenue Q Transit Village Mixed Use district, to encourage medical office development)</i>	5 stories, 55 ft. (60 ft. with ground-floor commercial)	Underground or structured parking within building; surface parking at rear of site.	15% of site area as shared open space or publicly-accessible plaza; Average of 75 sq. ft. open space per unit; Minimum dimension of private open space: 10 ft. for ground level open space and 6 ft. for balconies/porches
Transit Corridor Mixed Use (TCMX)	Podium-style condominiums and apartments with ground-floor active commercial uses	Min. 18 du/ac Max. 40 du/ac Min. FAR: 0.6 Max. FAR: 2.0 With bonus: Up to 60 du/ac and 2.5 FAR	4 stories, 45 ft. (50 ft. with ground-floor commercial) With bonus: Up to 5 stories, 55 ft. (60 ft. with ground-floor commercial)	Underground or structured parking within building; surface parking at rear of site.	15% of site area as shared open space or publicly-accessible plaza Average of 75 sq. ft. open space per unit; Minimum dimension of private open space: 10 ft. for ground level open space and 6 ft. for balconies/porches
Residential					
High Density Residential (HDR)	Podium-style condominiums and apartments	Min. 30 du/ac Max. 60 du/ac	5 stories, 55 ft.	Structured or surface parking under or at rear of building	15% of site area as shared open space; average of 100 sq. ft. open space per unit
Medium-High Density Residential (MHDR)	Townhouses, courtyard apartments, podium-style apartments or	Min. 16 du/ac Max. 30 du/ac	4 stories, 45 ft.	Private garages; deck or surface parking under or at rear of	20% of site area as shared open space; average of 100 sq. ft. open space per unit

TABLE 1.3-1: SUMMARY OF DENSITY, INTENSITY, AND DEVELOPMENT STANDARDS					
<i>TOD Land Use Framework Plan Designation</i>	<i>Typical Building Types</i>	<i>Density or Intensity (du/ac or FAR for all uses)</i>	<i>Maximum Building Height (stories, height)</i>	<i>Parking Location</i>	<i>Usable Open Space</i>
	condos			building	
Medium Density Residential (MDR)	Single-family attached, detached; duplexes; townhouses	Min. 6 du/ac Max. 16 du/ac	3 stories, 35 ft.	Private garages; surface parking to side or rear	20% of site area as shared open space; average of 100 sq. ft. open space per unit
Commercial, Office and Industrial					
Commercial (C)	Auto-oriented commercial and hotels	Max. FAR: 1.0	3 stories, 45 ft.	Parking on rooftop or within building, or on side or rear of lot with screening and landscaping	NA
Business Mix (BM)	Low intensity office and light industrial development	Max. FAR: 1.0	3 stories, 45 ft.	Surface parking with screening and landscaping	NA
Auto Center (AC)	Low intensity auto sales	Max. FAR: 1.0	Per AVACSP	Surface parking with screening and landscaping	NA
Public					
Public Facility (PF)	Public facilities	Max. FAR: 1.0	3 stories, 45 ft.	Parking on rooftop or within building, or on side or rear of lot with screening and landscaping	N/A
Open Space and Recreation (OSR)	Parks, plazas, preserved open spaces, trails	NA	NA	Surface parking for community-serving parks or recreation facilities	N/A

Source: Dyett & Bhatia, 2015

DENSITY AND FAR BONUSES

A bonus point system for Palmdale’s mixed-use zones could be based on points, calibrated to costs.

- The maximum FAR bonus/residential density/maximum height bonus requires 100 points; fewer points result in a lower bonus FAR/residential density/maximum height. The maximum points attainable exceeds 100, so an applicant may be able to obtain the maximum bonusable FAR/bonusable height without having to qualify under all bonusable elements.
- The bonus should be available on a pass/fail basis in some cases, but other bonusable elements are proportional to project size, which will require calculations by applicants, to be verified by City staff.

All bonuses would be discretionary and subject to approval of a Conditional Use Permit. The Planning Commission may allow only a partial bonus based on an evaluation of urban design and community benefits. The formula for attaining the bonus could be as shown in Table 1.3-2.

ALLOWED USES

Table 1.3-3 summarizes regulations that would apply to a wide range of potential land uses for each of the districts included in the Avenue Q Land Use Framework. The table does not address specific building proposals and does not include all possible land uses. Proposed regulations for each district are established by letter designations listed below.

- “P” designates uses permitted as-of-right. Approval may be discretionary if all applicable standards are met or may require Site Plan Review.

- “L” designates uses permitted as-of-right subject to limitations on location, size or other characteristics. Limitations are referenced by number designations and listed at the bottom of the table.
- “C” designates uses that may be conditionally permitted subject to approval of a Conditional Use Permit.
- ‘-’ designates uses that are not permitted.

TABLE I.3-2: POTENTIAL FAR AND DENSITY BONUS SYSTEM		
Bonusable Element	Maximum Potential Points	Basis for Calculating Points
Affordable housing <i>Note: state-mandated density bonus for affordable housing applies separately.</i>	20 (20%)	Projects providing more than 10% of housing units affordable: <ul style="list-style-type: none"> • 10 pts for projects with 20% of units for moderate income households (80-100% Area Median Income, or AMI) • 15 pts for projects with 10% for lower income households (less than 80% AMI) and 10% moderate income households (80-100% AMI) • 1 pt for each additional % of units for lower income households (less than 80% AMI), up to 20% total
High Performance Green Features: Eco-roofs, on-site renewable energy, LEED™ certification or equivalent at various levels.	10 (10%)	5 pts if 75% of total building roof as eco roof, provided eco roof and “eco landscape” together exceed 50% of total site area. 7.5 pts if 10% of total building energy load provided by solar panels or other on-site renewable sources, including co-generation. 10 pts for LEED™ Gold or equivalent (certification req’d)
Public Open Space. Public parks and/or plazas beyond required park-dedication standards.	45 (45%)	15 pts: Provision of at least 5% of site area—with a minimum 1,000 sq.ft. — as privately owned urban open space (with location, dimension criteria and maintenance obligations specified). 30 pts: Provision of 10% of site area as privately owned urban open space. 40 pts: Provision of 15% of site as privately owned urban open space 5 pts: Contribution to citywide Parks Fund (minimum amount to be specified in Council resolution, updated periodically)
Public Right-of-Way Improvements. Improvements to a public right-of-way (such as improvements to a streetscape) beyond normal improvements required along property frontage.	35 (35%)	Pts to be based on dollar value of off-site improvements x 7.5 divided by average development cost per square foot or other case-by-case determination
Historic preservation	10 (10%)	5 pts for each 0.5% of construction cost for historic preservation of 1:1 or 2:1 sq.ft. of space preserved.
Community services	10 (10%)	Allowed only for a project supporting qualifying community services for a minimum time period or providing space for such services. Examples of qualifying community services include health clinics, after school programs, and daycares.
Total Potential Points	130	(Theoretical maximum exceeds 100, but only a maximum of 100 points will be credited to the bonus FAR/bonus height calculation.)

Source: Dyett & Bhatia, 2015.

TABLE I.3-3: USE REGULATIONS

Use Classifications	Mixed Use		Residential			Commercial, Office, Industrial			Public	
	Transit Village (TVMX)	Transit Corridor (TCMX)	High Density (HDR)	Medium High Density (MHDR)	Medium Density (MDR)	Commercial (C)	Auto Center (AC)	Business Mix (BM)	Public Facility (PF)	Open Space & Recreation (OSR)
Residential Uses										
Single-Family Dwelling, Detached	-	-	-	-	L(1)	-	-	-	-	-
Single-Family Dwelling, Attached	-	-	-	L(1)	P	-	-	-	-	-
Multiple-Family Residential	L	P	P	P	P	-	-	-	-	-
Public and Semi-Public Uses										
College and Trade Schools, Public or Private	C	C	-	-	-	P	-	P	C	-
Community Center	P	P	C	C	C	P	-	C	P	C
Cultural Institutions	C	C	C	C	C	P	-	C	P	C
Day Care Centers	P	P	C	C	C	P	-	C	L(2)	L(2)
Government Offices	C	C	-	-	-	C	-	P	C	-
Parks and Recreation Facilities, Public	P	P	P	P	P	P	P	P	P	P
Schools, Public or Private	-	-	-	-	C	-	-	C	P	-
Transportation Passenger Terminals	P	P	-	-	-	C	-	C	C	-
Utilities, Minor	P	P	P	P	P	P	P	P	P	-

TABLE I.3-3: USE REGULATIONS

Use Classifications	Mixed Use		Residential			Commercial, Office, Industrial			Public	
	Transit Village (TVMX)	Transit Corridor (TCMX)	High Density (HDR)	Medium High Density (MHDR)	Medium Density (MDR)	Commercial (C)	Auto Center (AC)	Business Mix (BM)	Public Facility (PF)	Open Space & Recreation (OSR)
Commercial Uses										-
Animal Sales and Services	C	C	-	-	-	C	-	-	-	-
Automobile/Vehicle Sales and Service	-	-	-	-	-	P	P	C	-	-
Banks and Financial Institutions	P	P	-	-	-	P	C	P	-	-
With Drive-Through Facilities	-	-	-	-	-	C	-	C	-	-
Eating and Drinking Establishments										
Bars/Clubs/Lounges	C	C	-	-	-	C	C	-	-	-
Coffee Shops/Cafes	P	P	-	-	-	P	C	P	L(2)	L(2)
Restaurants, Full-Service	P	P	-	-	-	P	C	P	-	-
Restaurants, Limited Service	P	P	-	-	-	P	C	P	-	-
With Drive-Through Facilities	-	-	-	-	-	P	C	P	-	-
With Outdoor Seating Areas	C	C	-	-	-	P	C	P	-	-

TABLE I.3-3: USE REGULATIONS

Use Classifications	Mixed Use		Residential			Commercial, Office, Industrial			Public	
	Transit Village (TVMX)	Transit Corridor (TCMX)	High Density (HDR)	Medium High Density (MHDR)	Medium Density (MDR)	Commercial (C)	Auto Center (AC)	Business Mix (BM)	Public Facility (PF)	Open Space & Recreation (OSR)
Food and Beverage Sales										
Convenience Market	C	C	L(3)	L(3)	-	C	C	C	-	-
General Market	P	P	-	-	-	P	C	P	-	-
Live-Work Units	P	P	-	-	-	-	-	-	-	-
Hotels and Motels	P	P	C	C	C	P	-	P	-	-
Offices										
General	L (4)	L (4)	-	-	-	P	-	P	-	-
Medical and Dental	L (4)	L (4)	-	-	-	P	-	P	-	-
Walk-in Clientele	P	P	-	-	-	P	-	P	-	-
Parking, Commercial	C	C	-	-	-	-	C	-	-	-
Personal Services	P	P	-	-	-	P	-	P	-	-
Retail Sales										
General	P	P	-	-	-	P	C	P	-	-
Large-Format	-	-	-	-	-	C	-	C	-	-
Industrial and Service Commercial Uses										
Manufacturing, Processing, Assembly, Packaging, Treatment and Fabrication	-	-	-	-	-	-	-	L (5)	-	-
Wholesale Trade	-	-	-	-	-	-	-	P	-	-

TABLE I.3-3: USE REGULATIONS

Use Classifications	Mixed Use		Residential			Commercial, Office, Industrial			Public	
	Transit Village (TVMX)	Transit Corridor (TCMX)	High Density (HDR)	Medium High Density (MHDR)	Medium Density (MDR)	Commercial (C)	Auto Center (AC)	Business Mix (BM)	Public Facility (PF)	Open Space & Recreation (OSR)
Retail Trade (goods used primarily by businesses)	-	-	-	-	-	P	-	P	-	-
Services	-	-	-	-	-	-	-	-	-	-
Construction or Contracting	-	-	-	-	-	-	-	-	-	-
Transportation, Freight and Storage	-	-	-	-	-	-	P	-	-	-
Personal or Business Services	-	-	-	-	-	-	-	P	-	-
Automotive Services	-	-	-	-	-	C	P	C	-	-
Repair and Maintenance Services	-	-	-	-	-	-	C	P	-	-
Research, Development, and Testing	-	-	-	-	-	-	-	P	-	-

Notes on Use Limitations:

1. Permitted where development project is within density range of the land use class. For example, detached, zero-lot-line units may be permitted in Low-Medium Density classification if the project's density is between 6 and 16 units per acre.
2. Permitted as an accessory use.
3. Permitted where store is less than 3,000 SF and offers healthy, perishable food options.
4. Permitted on upper floors above ground level.
5. Light manufacturing is permitted. Heavy manufacturing (e.g., involving mining, refining, ammunition, explosives, etc.) is prohibited.

Source: Dyett & Bhatia, 2015.

REQUIRED ACTIVE STREET FRONTAGES AND ENTERTAINMENT AREAS

Required Active Street Frontages

Figure 1.3-4 identifies street frontages where active uses are required on the ground floor in order to maintain a vibrant, pedestrian-oriented environment. These streets include segments of Avenue Q and Trade Center Drive. Active commercial uses may include but are not limited to: eating and drinking services, retail services, banks, gyms, galleries, laundromats, beauty salons, and other walk-in friendly personal services.

Entertainment Areas

Figure 1.3-4 also shows where a concentration of entertainment uses is envisioned. It would establish a special set of allowed and conditionally allowed uses along Avenue Q between SR-14 and 5th Street West. Preferred uses include movie theaters, performance venues, and restaurants and bars.



Photo 1.3-8: Requiring at least 50 percent ground floor active uses along select streets creates a pedestrian friendly environment, while still allowing development flexibility.



Photo 1.3-9: Entertainment uses, including theatres, performance venues, restaurants and bars, facilitate an active, vibrant street life.

1.3.4 Land Use Summary

Table 1.3-4 shows the land use breakdown of the Land Use Plan within the Study Area.

Anticipating future growth and housing demand in Palmdale, residentially designated development (including residential and residential mixed use) would constitute approximately 43 percent of the Study Area. Commercial development, both auto- and transit- oriented, would continue to be the dominant land use, taking up roughly 54 percent of the land.

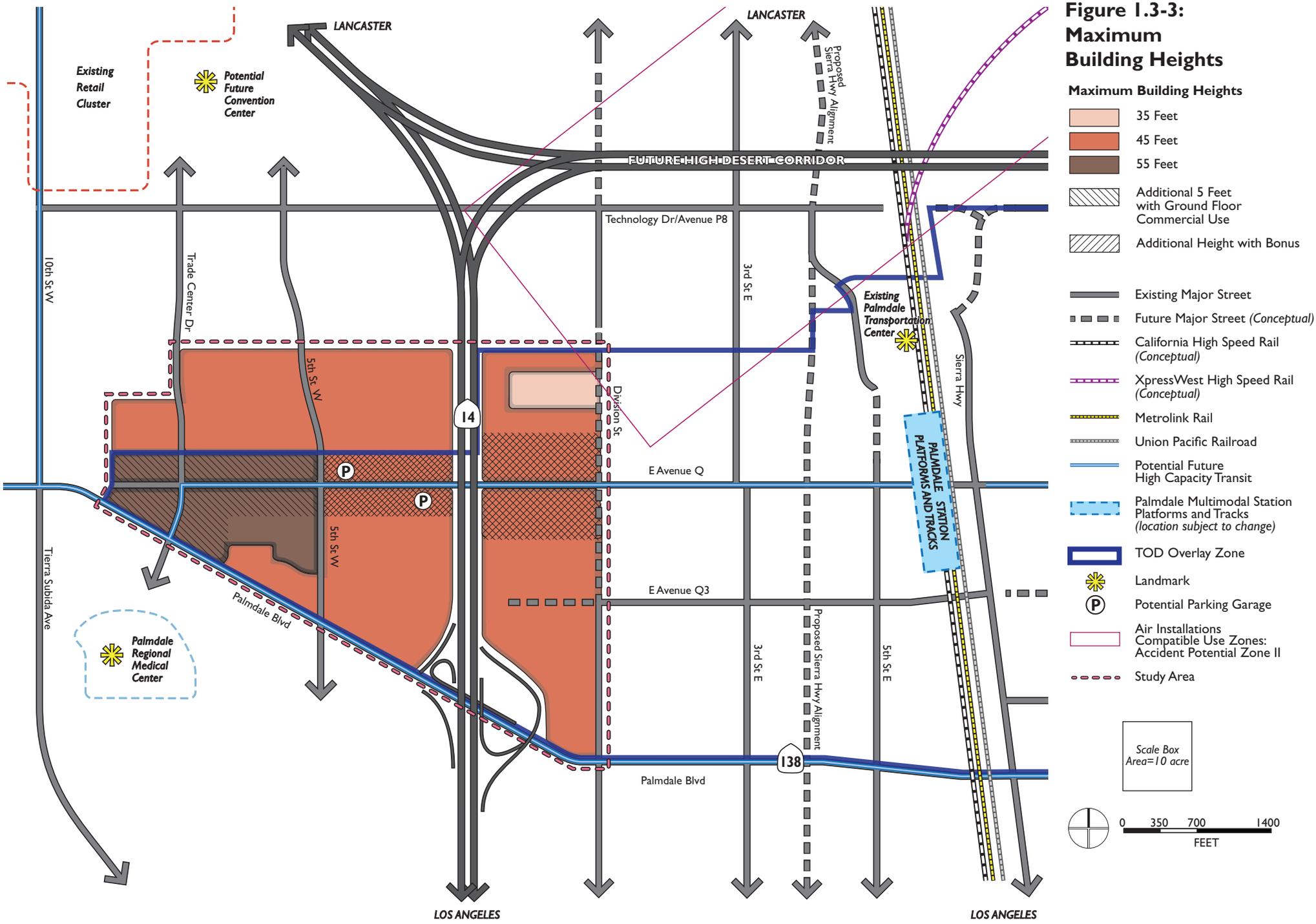
LAND USE CHANGE BY SPECIFIC PLAN

The entirety of Avenue Q Feasibility Study Area is covered by two Specific Plans: the Palmdale Trade and Commerce Center Specific Plan and the Antelope Valley Auto Center Specific Plan. Table B-1 in Appendix B shows a detailed breakdown of land use change from Specific Plans to the Avenue Q Land Use Framework Plan. Previously with no residential designation in either Specific Plan, the Study Area now would have over 100 acres of residential and residential mixed use land. The PTCCSP Planned Development (PD) zone, established for auto-oriented retail, hospitality, and entertainment uses, would now also include medium-high to high density residential and mixed uses. The AVACSP would largely retain its original land use, while contributing its Avenue Q facing land to entertainment-oriented commercial developments.

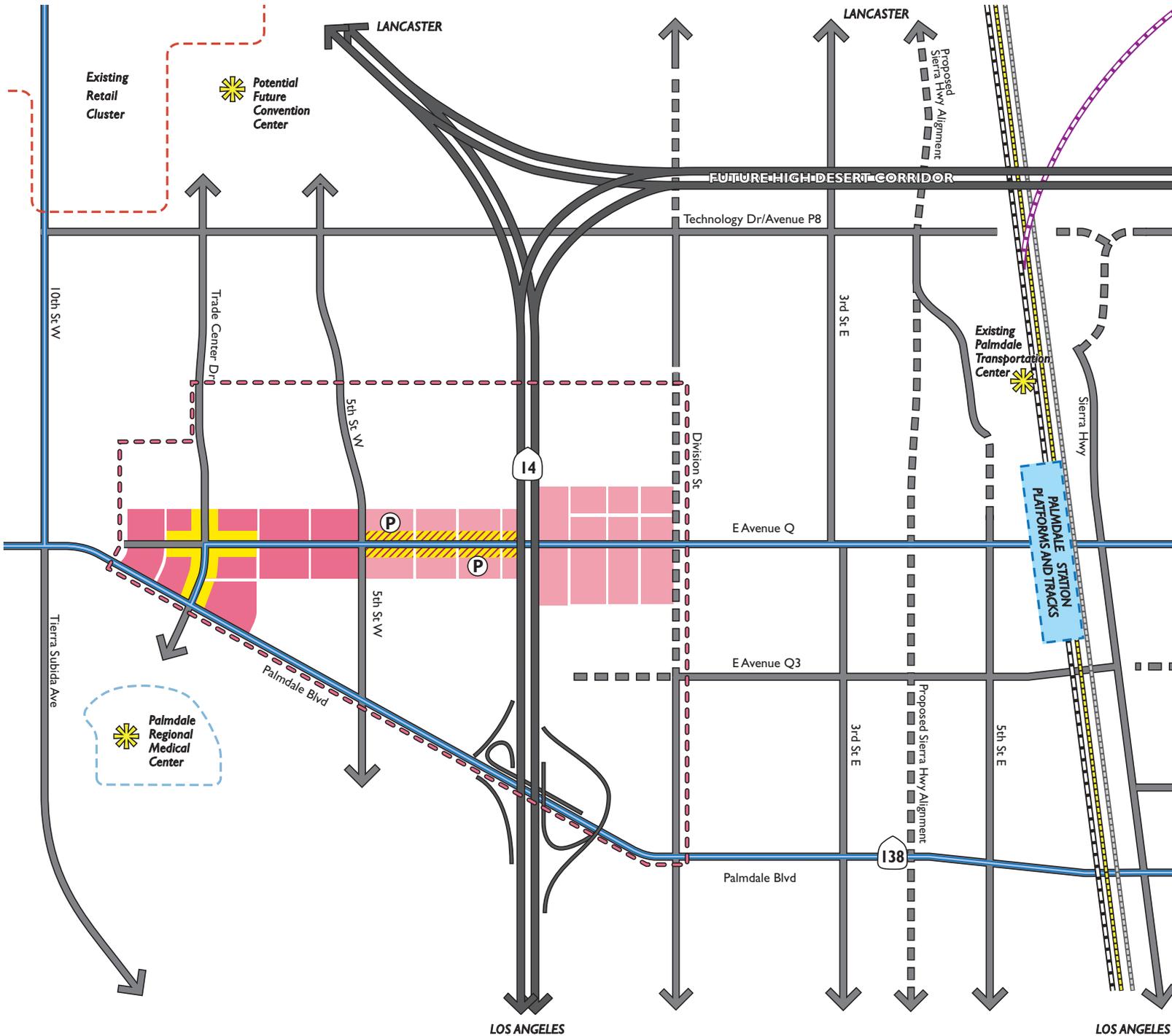
TABLE 1.3-4: LAND USE SUMMARY		
	Acreage	Percent of Study Area
Overlay Zones		
TOD Overlay Zone	182	73%
Land Use Designations		
Mixed Use		
Transit Neighborhood Mixed Use (TVMX)	24	10%
Transit Corridor Mixed Use (TCMX)	36	14%
Residential		
High Density Residential (HDR)	9	4%
Medium-High Density Residential (MHDR)	30	12%
Medium Density Residential (MDR)	8	3%
Commercial, Office and Industrial		
Commercial (C)	63	27%
Business Mix (BM)	44	18%
Auto Center (AC)	22	9%
Public		
Public Facility (PF)	8	3%
Totals	44	100%
Note: I. Does not include right-of-way for future streets.		

Source: Dyett & Bhatia, 2015

**Figure I.3-3:
Maximum
Building Heights**



**Figure I.3-4:
Required Active Street
Frontages and
Entertainment Areas**



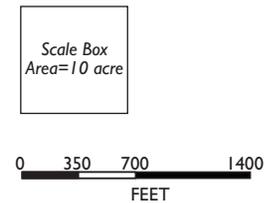
Required Active Street Frontages

- Active Street Frontage
- Entertainment Focus

Avenue Q Land Use Plan Designation

- Transit Corridor Mixed Use
- Transit Village Mixed Use

- Existing Major Street
- Future Major Street (Conceptual)
- California High Speed Rail (Conceptual)
- XpressWest High Speed Rail (Conceptual)
- Metrolink Rail
- Union Pacific Railroad
- Potential Future High Capacity Transit
- Palmdale Multimodal Station Platforms and Tracks (location subject to change)
- Landmark
- P Potential Parking Garage
- Study Area



PROJECTED DEVELOPMENT

The Avenue Q Land Use Framework Plan would allow up to approximately 1,022 residential units in the Study Area. It will also allow up to 1.3 million square feet of commercial uses, including 867,000 new square feet and preservation of 478,000 existing square feet. Land use assumptions used in projecting future development and a detailed breakdown of future development by type are provided in Appendix C.

1.3.5 Policies

This section provides policies to guide the City of Palmdale in implementing the vision of the Avenue Q Land Use Framework. Policies are organized by how they support the desired overall land use pattern, and then by subarea. Guiding policies state the Plan's goals, while implementing policies identify strategies to realize those goals, primarily through revisions to the General Plan, Specific Plans, and Zoning Ordinance; and the creation of a new TOD Overlay Zone. All policies in this document are identified by the code "LU", for land use. Guiding policies feature the code "G", while implementing policies are coded "I". Thus, the first guiding policy is identified as LU-G-1, the first implementing policy as LU-I-1, and so on.

OVERALL VISION AND LAND USE PATTERN

Guiding Policies

- LU-G-1 **Multimodal Transportation Corridor.** Plan Avenue Q as a multi-modal transportation corridor linking major destinations and employment areas with the future Palmdale Multimodal Station.
- LU-G-2 **Transit-Oriented Development.** Foster Transit-Oriented Development (TOD) and supportive public improvements along and around Avenue Q that increase development within walking and biking distance of transit, jobs, and shopping to support affordable, healthy and sustainable lifestyles.
Remove regulatory constraints to TOD by identifying necessary amendments to the General Plan, Zoning Ordinance, AVACSP and PTCCSP.
- LU-G-3 **Complete Community.** Foster a complete community that is attractive to young professionals, families with children, and others to stimulate economic development.
- LU-G-4 **Engaged Community.** Provide a positive vision for Palmdale, and continue to engage business owners, property owners and other stakeholders in planning for future development.
- LU-G-5 **Robust Bike and Pedestrian Network.** Allow for a well connected pedestrian and bicycle network with safe and pleasant routes for walkers and cyclists of all ages to easily move about the Study Area.
- LU-G-6 **Provide Adequate Infrastructure.** Provide adequate infrastructure to support future development. This could include upgrades to potable water conveyance facilities, the sewage system, stormwater management facilities, and power and/or gas infrastructure.



Photo 1.3-10: A mix of residential, commercial, office and public uses in close proximity to transit creates a lively, active corridor.

Implementing Policies

General Plan Revisions

- LU-I-1 **Mixed Use Land Use Designations.** Create new General Plan designations to support mixed-use development along the future Avenue Q transit corridor. Two new districts are proposed: Transit Village Mixed Use and Transit Corridor Mixed Use.
- LU-I-2 **Update General Plan Land Use Map.** Land throughout the Study Area should be redesignated to be consistent with the Avenue Q Land Use Plan (Figure 1.3-2.) Correspondence between proposed Avenue Q land use designations and existing General Plan designations is summarized in Appendix A.

- LU-I-3 **Vehicle Miles Travelled.** Revise General Plan policies C1.4.1 and C1.4.2 in the Circulation Element to ensure that approvals of new development are correlated with strategies to reduce vehicle miles travelled (VMT).

Specific Plan Revisions

- LU-I-4 **Remove Land from the Avenue Q Feasibility Study from Palmdale Trade and Commerce Center Specific Plan.** The Avenue Q Land Use Framework envisions land along the Avenue Q corridor and between Avenue Q and Palmdale Boulevard as developing with new mixed-use districts and transit-oriented neighborhoods. These goals are not well-matched with those of the PTCCSP, so this area should be removed from that Specific Plan area. All references to that area in the PTCCSP and all PTCCSP maps should be updated.
- LU-I-5 **Remove Land between SR-14, Division Street, Palmdale Boulevard, and Avenue P-12 from Palmdale Trade and Commerce Center Specific Plan.** The Avenue Q Land Use Framework envisions land between SR-14 and Division Street as developing with a new transit-oriented neighborhood near Avenue Q. These goals are not well-matched with those of the PTCCSP, so this area should be removed from that Specific Plan area. All references to that area in the PTCCSP and all PTCCSP maps should be updated.

Zoning Revisions

- LU-I-6 **New Mixed Use Designations and Zoning Districts.** Create new General Plan and zoning districts to support mixed-use development along the future Avenue Q transit corridor. Two new districts are

proposed: Transit Village Mixed Use and Transit Corridor Mixed Use. Development standards for these zones are summarized in Table 1.3-1.

- LU-I-7 **New Medium-High Density Residential Designation and Zone.** The Palmdale Zoning Ordinance does not include a district providing for housing in the 16 to 30 units per acre range. Create a Medium-High Density Residential (R-3.5) Zone, and apply the zone generally between high-density transit-oriented development and lower-density residential neighborhoods (see Figure 1.3-2). Development standards for this zone is summarized in Table 1.3-1.
- LU-I-8 **Rezone Land to Match Avenue Q Land Use Plan.** Land throughout the Study Area should be rezoned to be consistent with the Land Use Plan (Figure 1.3-2.) Correspondence between proposed land use designations and zoning districts is summarized in Appendix A.
- LU-I-9 **Palmdale TOD Overlay Zone.** Create a TOD Overlay Zone that will serve as a primary tool in creating a walkable, transit-oriented land use pattern and high-quality urban environment around the future Palmdale Multimodal Station. The proposed boundaries of the TOD Overlay Zone are shown on Figure 1.3-2. With the TOD Overlay Zone, provide development standards to ensure that the vision and goals of this plan are carried out in future private developments and public investments.

New Streets, Parks and Public Spaces

- LU-I-10 **Small Blocks and Street Network.** Require land dedication and the collection of facilities financing fees to create new streets. Enhance the design of

existing streets, generally following the street system diagram and street spacing and block size requirements provided in the Multimodal, Access, and Connectivity Plan.

- LU-I-11 **Green Connections.** Give priority to enhancing streetscapes along “Green Connections” designated on the Avenue Q Land Use Plan and the policies provided in the Urban Design, Street, and Streetscape Standards Plan. Streetscape enhancements should include climate appropriate shade-providing trees, shade structures, pedestrian amenities, rain gardens and drought-tolerant landscaping, special paving, and other features.

TRANSIT CORRIDOR AND TRANSIT VILLAGE

Guiding Policies

- LU-G-7 **Avenue Q Transit Corridor.** Along Avenue Q, facilitate the development of mixed use buildings with active, sidewalk-oriented uses on the ground floor and apartments and condominiums above. Avenue Q itself will be redesigned as a Transit Corridor with wide sidewalks, climate appropriate landscaping, and pedestrian amenities, providing a link between the future Multimodal Station and regional destinations.

Photo I.3-11:
Pedestrian oriented streets and public spaces complement higher residential density.



- LU-G-8 **Transit Village.** Facilitate the development of a lively transit village that features four- to five-story residential and office buildings with ground-floor commercial uses, as well as new streets, enhanced streetscapes, and parks.
- LU-G-9 **Entertainment District.** Foster a vibrant entertainment district along Avenue Q, featuring restaurants, entertainment venues, nightlife, and other attractions that are lacking in Palmdale today.
- LU-G-10 **Medical Office Uses.** Restrict medical offices and residential uses from occurring in the same mixed use building to protect patient privacy and reduce the likelihood of incompatibility issues. Facilitate the development of mixed use buildings with retail on the ground floor and offices above as an appropriate setting for medical office uses.
- LU-G-11 **Convenient and Consolidated Parking.** Provide well-lit parking options within a short walk of new restaurants, bars, shops and entertainment venues. Promote the use of structured garages, underground

parking and surface lots located behind buildings, so as not to detract from a pedestrian-oriented streetscape. Where appropriate, permit shared parking for adjacent uses with different operating hours.

Implementing Policies

General Plan Revisions

- LU-I-12 **Active Commercial Corridors.** Revise General Plan policies L4.2.1, L4.2.2 and L4.2.5 in the Land Use Element to support active, mixed-use commercial corridors that create vibrant pedestrian-oriented streets along Avenue Q.
- LU-I-13 **Concentrated Development.** Revise General Plan Policy L2.3.1 in the Land Use Element to support concentrated, transit-oriented development that aligns with the new mixed use designations.

Specific Plan Revisions

- LU-I-14 **Modify Antelope Valley Auto Center Specific Plan to Allow Entertainment-Focused Mixed Use.** Revise the AVACSP to facilitate the development of a mixed-use entertainment district along Avenue Q directly adjacent to the auto mall. The Auto Center should continue to have visibility along Avenue Q, with prominent entry and signage elements. Auto-themed entertainment uses may be promoted for the Avenue Q frontage, and other entertainment uses may be allowed. Residential uses may also be permitted above the ground floor in the Transit Corridor Mixed Use district located along Avenue Q.

Zoning Revisions

- LU-I-15 **Performance Bonuses.** As part of the mixed use zones, create a system whereby additional FAR, residential density, and building height may be permitted where specified services and features are provided. These may include but are not limited to:
- Provision of affordable housing or contribution to an affordable housing fund administered by the City of Palmdale that may be used for new development within the Study Area;
 - Publicly-accessible plazas that meet dimensional and design requirements and are in excess of required landscaped open space;
 - High-performance green design characteristics that exceed the CALGreen building requirements by a specified and measurable amount.
- LU-I-16 **Active Street Frontage.** On blocks designated for Required Active Street Frontage on Figure 1.3-4, buildings and parking structures shall be designed and constructed for occupancy of at least 50 percent of the ground-floor building frontage facing any street or transit station with active commercial uses. These uses may include retail, restaurants, personal services, entertainment uses, or community uses such as schools or daycares. Such uses shall occupy a minimum depth of 50 feet.
- LU-I-17 **Entertainment Use Emphasis.** Establish priority for entertainment uses along Avenue Q between 5th Street West and SR-14, as shown on Figure 3-4. Along this segment of Avenue Q, entertainment uses including restaurants, theaters, cinemas, performance venues, microbreweries and bars, dessert and ice

cream shops, and businesses with late operating hours would be permitted as-of-right. Other commercial uses would require a discretionary permit.



Photo 1.3-12: Retail, restaurant and entertainment uses create a lively, pedestrian-friendly atmosphere.

TOD Overlay Zone Standards

Building Massing and Form

- LU-I-18 **Step Back above Street Wall.** In the Transit Village Mixed Use Zone, new buildings along streets less than 70 feet in width should “step back” by 10 feet above 45 feet or the 4th floor in order to avoid creating a canyon-like effect on the street. The stepback requirement would apply to 75 percent of the length of front facades, providing for greater variety in building forms.
- LU-I-19 **Increase Heights for Ground-Floor Active Uses.** In the Transit Corridor Mixed Use Zone, increase the

allowed building height by up to 5 feet for buildings that provide active ground-floor commercial uses with floor-to-ceiling heights, with one foot of additional building height provided for each foot of ground-floor height over 10 feet. Residential-only buildings shall be no higher than 5 stories or 55 feet using base district provisions.

LU-I-20 **Building Articulation.** In both mixed use zones, for buildings more than 100 feet in length, require that at least 25 percent of each street-facing façade be divided into smaller portions in such a way that creates architectural interest and avoids a large-scale, bulky or “box-like” appearance. Strategies may include but are not limited to:

- Variety in Wall Plane.
- Variety in Height or Roof Forms.
- Façade Design Incorporates Architectural Detail.
- Balconies, Bay Windows, and other such Projections or Recesses.
- Limit building length to 150 feet along street frontages.

LU-I-21 **Transitions to Adjoining Residential Districts.** In both mixed-use districts, limit building heights to 45 feet within 25 feet of adjacent properties in Medium-High or Medium Density Residential districts, and to 35 feet within 25 feet of adjacent properties in Low Density Residential districts. Provide a minimum 10-foot setback from property lines of any adjoining residential district (single-story commercial buildings are exempt from this requirement).

LU-I-22 **Full-Block Zoning Transitions.** Where a site in a Transit Village Mixed Use or Transit Corridor Mixed Use district contains frontages on both a commercial or mixed-use corridor and on a street where the site adjoins a residential district, commercial uses should face the commercial street frontage. Within the first 15 feet of the property line adjoining the residential street frontage, building height is limited to 45 feet in the Transit Village Mixed Use district, or 35 feet in the Transit Corridor Mixed Use district.

Street Frontages

LU-I-23 **Orientation of Main Building Entrance.** In both mixed-use districts, at least one primary entry of each building shall face or be oriented to within 45 degrees of parallel to the street frontage, to any adjacent transit station, or to a public plaza. Such entrance(s) must allow pedestrians to both enter and exit the building and must remain unlocked during business hours.

LU-I-24 **Ground Floor Windows.** Along Active Street Frontages designated on Figure 1.3-4, at least 50 percent of the ground floor façade should be composed of windows, to facilitate active ground-floor commercial use and create pedestrian interest on the sidewalk. The requirement for ground-floor windows also applies to residential and office lobbies and common areas.

LU-I-25 **Ground-Floor Residential Uses.** In both mixed use zones, the ground floor of residential buildings should be either directly adjacent to the sidewalk and feature at least 50 percent window coverage; be set back up to 8 feet from the street frontage, with intervening landscaping; or be raised at least 2 feet above the sidewalk elevation.

Photo 1.3-13
Trees and other shade structures make public plazas appealing on warm days.



LU-I-26 **Pedestrian Access and Circulation.** On-site pedestrian circulation and access must be provided that connects public sidewalks with building entrances, and building entrances with each other. Pedestrian paths must be designed to be clearly identifiable where they cross driveways, parking or loading areas. Pathways and sidewalk be shaded with awnings, canopies, porticoes, arcades, and landscaping.

Parking

The following proposed standards would apply in both mixed use zones within the TOD Overlay Zone.

LU-I-27 **Reductions to Required Parking.** The number of parking spaces is automatically reduced by 25 percent of the normally required number of spaces for any site located in any mixed use zone in the TOD Overlay. Additional reductions to up to 50 percent of

the number of required parking spaces may be approved if certain findings are made regarding access to transit service, and site-and use-specific conditions that affect parking supply or demand.

LU-I-28 **Parking Exemption for Small Commercial Uses.** For active commercial uses including retail, restaurants, and personal services, parking need only be provided for floor area exceeding 1,500 feet per establishment.

LU-I-29 **Substitution of On-Street Spaces.** On-street parking spaces adjacent to the frontage of properties in the transit mixed use districts may be counted toward required off-street parking for non-residential uses. One on-street parking space may be substituted for each required off-street space.

LU-I-30 **Parking (Maximum) Limit.** The number of parking spaces for non-residential uses shall not exceed 120 percent of the required parking spaces.

LU-I-31 **Parking Location and Design.** Off-street parking shall be located underground, within a parking structure, or in surface lots at the side or rear of buildings, or between two or more buildings on a lot. No parking space shall be located between a building and an adjacent street. All surface parking spaces visible from a public right-of-way shall be screened with a wall between 2.5 and 3.5 feet in height.

LU-I-32 **Driveways and Curb Cuts.** Generally, on lots less than 100 feet in width, driveways and curb cuts should be limited to one per frontage. On wider lots, driveways should be limited to one per 100 feet of frontage. On corner lots, curb cuts shall be located on the street frontage with the least pedestrian activity.

Exceptions may be granted with a use permit for uses that have greater circulation requirements.

LU-I-33 **Parking Lot Landscaping.** Shade trees shall be provided at a ratio of one tree for every five parking stalls. A minimum of 10 percent of the area of any surface parking lot shall be landscaped, and the landscaping shall be irrigated by an irrigation system that is permanent, below-grade, and activated by automatic timing controls.

LU-I-34 **Standards for Structured Parking.** The exterior elevations of any multi-level parking structure must be designed so as to screen or conceal parked cars from view from public streets and open space on the first and second floors of the structure. The parking areas of structured parking garages must be screened or concealed by providing ground-floor commercial uses; landscaping; and/or a minimum 10-foot landscaped setback.

LU-I-35 **Parking for Bicycles.** Short-term bicycle parking facilities shall be provided at a rate of 10 percent of the number of normally required automobile parking spaces. Short-term bicycle parking should be visible from the street or from the main building entrance, and should be located within 50 feet of the main building entrance.

Long-term bicycle parking shall be provided to serve employees, students, residents, commuters, and others who generally stay at a site for four hours or longer. A minimum of one bicycle parking space shall be provided for every four units for residential uses, or one space per 25 employees for non-residential uses. Standards must be provided to ensure safety and accessibility of long-term bicycle parking.

Residential Standards

LU-I-36 **Usable Open Space.** In all mixed use districts, require at least 15 percent of site area to be shared rooftop or courtyard open space, publicly-accessible plaza, and/or private outdoor area. Private balconies or yards must have an average usable open space of 75 square feet, and must meet dimensional and design criteria to ensure they are usable.

LU-I-37 **Residential Window Setbacks and Offsets.** In all mixed use districts, where residential windows face side or rear property lines they must be set back by at least 10 feet to ensure adequate light and air. Where new residential uses are developed adjacent to existing residential development along a shared side or rear lot line, windows should be offset from windows on the existing building to provide privacy.

NEW TRANSIT-ORIENTED RESIDENTIAL NEIGHBORHOODS, PARKS, AND PUBLIC FACILITIES

Guiding Policies

LU-G-12 **Walkable, Transit-Oriented Residential Neighborhoods.** Develop new walkable, transit-oriented residential neighborhoods, including 4- and 5-story condominiums and apartments, courtyard apartments, and townhouses. These new neighborhoods would take shape south of Avenue Q to the west of SR-14 and north of Avenue Q between SR-14 and Division Street.

New transit-oriented neighborhoods in the Avenue Q Study Area should emphasize high-amenity, high-density living.

LU-G-13 **Parks and Community Gathering Spaces.** Incorporate parks and community gathering spaces to improve the area's appearance and create recreational, social, and educational opportunities.

Implementing Policies

General Plan Revisions

LU-I-38 **Noise Sensitive Uses.** Revise General Plan Policy N1.2.3 in the Noise Element to allow for higher density development in close proximity to the Avenue Q transit corridor if appropriate noise mitigation measures are taken. Similarly, revise the implementation measures in Section 3E, Number 2 of the Noise Element to allow for higher density residential uses in areas that lie within the Frequent Overflight Area for Plant 42, but outside of Accident Potential Zone II.

Zoning Revisions

LU-I-39 **Accessory Uses.** Allow small (less than 3,000-square foot) convenience markets that provide healthy food options in High and Medium-High Density residential districts, to promote community health and walkable neighborhoods.

TOD Overlay Zone Standards

LU-I-40 **Building Height.** Within the TOD Overlay Zone, maximum building height in areas designated High Density Residential is 55 feet. This 5-foot reduction from the 60-foot height limit in the R-4 zoning district will help create an attractive transition between lower-density neighborhoods and the higher-intensity transit core area.

LU-I-41 **Setbacks.** Setback requirements for Medium Residential and Multiple Residential zones should match those established in Policy 3.4.8 of the PTVSP for neighborhood zones E, H, and I. Residential buildings should be set back between 8 and 18 feet from the street edge. Setback requirements for the new Medium-High Density Residential zone should match those established for PTVSP neighborhood zone C (0 to 8 feet).

LU-I-42 **Minimum Lot Size.** New multifamily developments should have a minimum lot area of 20,000 square feet, as provided in PTVSP policy 3.4.9.

LU-I-43 **Maximum Lot Coverage.** New multifamily and attached housing in the Low-Medium, Medium, and Medium-High Density Residential areas should not cover more than 50 percent of the lot, following PTVSP policy 3.4.12 for Neighborhood Zones C and D.

LU-I-44 **Usable Open Space.** In Medium, Medium-High, and High Density Residential areas, all multifamily developments should provide 15 to 20 percent of site area as usable common open space for passive and active recreational uses, or an average of 100 square feet of usable private open space per unit, following PTVSP policy 3.4.15.

Photo 1.3-14:
Open space corridors create a buffer between the freeway and residential uses.



PALMDALE BOULEVARD

Guiding Policies

- LU-G-14 **New Commercial Development.** Facilitate development of new shopping centers, offices, hotels, and related uses at locations with high visibility and access along Palmdale Boulevard. Future commercial development along the corridor should contribute to a positive image for the city, and provide a full range of convenient shopping and services for new area residents.
- LU-G-15 **Medical Office Uses.** Facilitate development that incorporates medical office uses along Palmdale Boulevard to take advantage of proximity to the Palmdale Regional Medical Center.

Implementing Policies

Zoning Revisions

- LU-I-45 **Design of Commercial Development.** New shopping centers developed on sites designated Commercial on the Avenue Q Land Use Plan must include building facades that directly address the street and sidewalk, and must preserve and create pedestrian connections to adjacent sites.

AUTO CENTER AND INDUSTRIAL AREA

Guiding Policies

- LU-G-16 **Trade and Commerce Uses.** Continue to provide for development of light industrial, office, research and development, and similar uses in the area north of Avenue Q between the Antelope Valley Auto Center and Trade Center Drive, following the guidance of the Palmdale Trade and Commerce Center Specific Plan.
- LU-G-17 **Auto Center Development.** Continue to provide for development of automobile dealerships following the guidance of the Antelope Valley Auto Center Specific Plan.

Implementing Policies

None required.

Part 2: Transportation Report

2.1 Introduction

This Transportation Report works together with the Land Use Framework Plan (Land Use Plan) for the Palmdale Avenue Q Feasibility Study to provide a Transit-Oriented Development (TOD) framework to guide public improvements and private development in the Study Area. The Land Use Framework Plan envisions walkable mixed-use neighborhoods that enable healthy, sustainable lifestyles. This Report provides transportation recommendations to support that vision. As described in the Land Use Plan, a transitional TOD land use and transportation network is feasible in the project area, given the area’s growing population, development potential and its existing and future transportation network: no major constraints or fatal flaws exist that would negatively impact TOD planning principles within the project area.

2.1.1 Purpose of the Transportation Report

The Transportation Report for the Palmdale Avenue Q project is a companion document to the Avenue Q Land Use Framework Plan. The Land Use Plan will serve to guide future development and public investments in the Study Area. It provides policy direction and identifies General Plan, Zoning Ordinance, Antelope Valley Auto Center Specific Plan (AVACSP) and Palmdale Trade and Commerce Center Specific Plan (PTCCSP) amendments needed to carry out the vision of Transit-Oriented Development (TOD) along Avenue Q. This Report supplements

the Land Use Plan by providing additional transportation policy direction. It is perhaps best thought of as an Appendix to the Land Use Plan.

The Report makes policy recommendations regarding all modes of transportation, in order to guide public improvements and private development in the Study Area. Like the Land Use Plan, this Report identifies General Plan and Zoning Ordinance amendments needed to carry out the Avenue Q vision. To avoid redundancy and the potential for confusion, the recommendations in this Report are limited (insofar as is possible) to transportation policies which have not already been addressed in the Land Use Plan. The recommendations address the following elements:

- The thoroughfare network, including standards for thoroughfares (i.e., streets, passages and trails) that result in the creation of “complete streets”, which meet the needs of all users, including pedestrians, bicyclists, transit users, and motorists.
- An integrated transit network, encompassing high-capacity transit corridors, bus and shuttle service (e.g. Antelope Valley Transit Authority routes), Metrolink commuter rail, and high-speed rail (California High-Speed Rail and XpressWest).
- Recommendations for transit access to Palmdale Regional Airport.
- Parking, including curb parking management, proposed public parking facilities, and policies for regulating private parking.
- Transportation demand management strategies.

REPORT OBJECTIVES

This Transportation Report aims to support the Land Use Plan in accomplishing the following key objectives:

- Create Transit-Oriented Development (TOD) and supportive streets and public spaces along the Avenue Q Corridor, connecting people with the Palmdale Transportation Center (PTC) and the city's future High Speed Rail station.
- Increase development within walking and biking distance of transit, jobs, and shopping to support affordable, healthy and sustainable lifestyles.
- Remove regulatory constraints to TOD by identifying necessary amendments to the General Plan, Zoning Ordinance, and relevant Specific Plans (PTVSP and PTCCSP).

2.1.2 Guiding Policies, Planning Process, Relationship to Other Plans, & Implementation

The Palmdale Avenue Q Land Use Framework Plan provides essential background reading for this Report, and should be reviewed before reading this document. The Land Use Plan includes the following useful sections. **Chapter 1.1, Introduction**, includes:

- **Section 1.1.1, Feasibility of Transit-Oriented Development on Avenue Q, and Section 1.1.2, Purpose**, establish the purpose of both the Land Use and

Transportation Report, and describes the Study Area in text and maps.

- **Section 1.1.3, Summary of Recommendations**, presents the Guiding Policies that guide both the Land Use Plan and the recommendations of this Transportation Report.
- **Section 1.1.4, Planning Process**, describes the background research, development of the TOD Circulation Plan document, and community workshops that have informed both the Land Use Plan and this Report.
- **Section 1.1.5, Plan Organization, and Section 1.1.6, Relationship to Other Plans**, describes the Land Use Plan's chapters, relationship to other planning documents, and relationship to important related transportation projects, such as the High Desert Corridor, California High-Speed Rail, and Xpress West High-Speed Rail.
- **Section 1.1.7, Implementation**, describes the plans and process for implementing both the Land Use Plan and the recommendations in this Report.

Chapter 1.2, Background, describes the existing land uses and community character; the key aspects of the General Plan, Specific Plans and Zoning Ordinance that regulate the Study Area; the community priorities expressed during the public outreach process for both plans; and the opportunities and constraints for transit-oriented development.

Chapter 1.3, Land Use Framework, provides an overview of the plan; explains the essential land use structure; and sets forth policies for guiding development and setting land use standards;

and sets forth policies for guiding development and setting land use standards.

2.1.3 Summary of Recommendations & Phasing

Section 1.1.2 of the Palmdale Avenue Q Land Use Framework Plan presents the key recommendations (i.e., the Guiding Policies) that guide both the Land Use Plan and the recommendations contained in this Transportation Report. The proposed Land Use Plan also contains many Implementation Policies that address transportation topics (e.g., parking, street design and streetscape character).

This section summarizes the key transportation recommendations contained in this Report. They are primarily Implementation Policies, which supplement and further articulate the policies presented in the Land Use Plan. These recommendations will support the implementation of a land use, transportation and public realm plan that will support the future Avenue Q transit corridor and enhance sustainability and quality of life in Palmdale. These recommendations are repeated as Guiding and/or Implementation Policies in later chapters.

Plan Implementation and Phasing

The Land Use Plan and the recommendations in this report will be implemented over many years (20+ years). For each Guiding Policy and Implementation Policy listed in the table below, a suggested time frame for implementation is shown. These suggested dates are only approximate, and should be reviewed and updated on a regular basis to reflect changing economic

conditions, changing timelines for major infrastructure investments (i.e., high-speed rail), the completion of tasks, and changes to funding and City priorities.

<i>Implementation Time Frame</i>	<i>Estimated Date of Completion</i>
Short	1 – 5 years
Medium	5 – 10 years
Long	10+ years (After inauguration of High-Speed Rail service to Palmdale)
Ongoing	Recurring or continuous action

Many of the policies recommended in this report may only require implementation in the medium (5 – 10 years) or long-term (10 or more years from today). In the long-term, high-speed rail trains will begin service to Palmdale Station. The California High-Speed Rail Authority has made it clear that they will be charging for parking at the station and not subsidizing it. To pay for the full cost of the parking – ultimately, structured parking – that will serve thousands of rail passengers, daily parking fees of \$8 to \$12 or more can be expected to be needed.¹ Additionally, properties in the station area will, most likely, have begun to redevelop with the high-density mixed-use buildings envisioned in the Land Use Plan.

To address these changes, some form of curb parking management will be essential. If there is no parking pricing or residential parking permit districts on City streets in and around the station area, these streets can be expected to overflow with

¹ Note that parking fees for XpressWest parking have yet to be determined.

hundreds of all-day commuters' cars. That is, if parking on the street remains free and unregulated, while the rail station's parking lots are unsubsidized, large numbers of riders can be expected to fill up the nearby curb parking. Additionally, once all of the free, unmanaged curb parking within an easy walk of the station fills, some commuters can be expected to park on the street near local transit stops (e.g., along the future Avenue Q transit corridor), and then take a short ride to avoid the station area's parking fees.

If curb parking is left free and unregulated, and allowed to overflow, a number of harmful secondary effects can be expected. When free or underpriced curb parking fills up, motorists frequently circle in search of underpriced curb parking, even as available (but not free) off-street parking facilities remain underused. Circling drivers create excess congestion and pollution, as well as additional traffic safety risks. And when curb parking – which is usually the most visible, most easily accessible and often perceived as the safest parking option – is allowed to fill, the widespread *perception* of an overall parking shortage typically results, even when many off-street parking spaces are readily available nearby.

Additionally, even without the advent of high-speed rail, active curb parking management is likely to be essential to the success of any walkable, high-density mixed-use developments. Experience from many similar urban districts has shown that if curb parking in high-density areas is left unmanaged, it tends to fill up (even when nearby, but slightly less convenient and less visible off-street parking is available). Depending on real estate market conditions, a significant number of the higher-density buildings allowed under the Land Use Plan may be completed in

the medium-term (in the next 5-10 years) or in the long-term (10+ years).

Therefore, in the medium-term, actively managing curb parking in the vicinity of the station (i.e., within a 10 minute walk), as well as in areas of high-density mixed-use development, may become necessary. In the long-term, it will be essential. Managing curb parking will require a mix of parking pricing and residential permit parking, in order to ensure that on-street parking is well used, but readily available. These parking policy recommendations for helping the plan area thrive and succeed in the mid- to long-term are described in more detail below, and in later sections of this report.

The Land Use Plan and this report should also be thought of as living documents, which will need to be regularly updated and refined. Over the coming years, long-range planning efforts will continue. For example, the plans and schedule for implementing California High-Speed Rail, the XpressWest High-Speed Rail, and other major infrastructure can be expected to change and evolve: the Land Use Plan and this report will then likely need to be amended in order to keep pace.

THOROUGHFARE POLICIES

<i>Policy</i>	<i>Time Frame</i>
TR-G-1 Build complete, attractive and multimodal streets that provide for the needs of diverse members of the community, safely provide for users of all modes of transportation, promote physical activity, and support environmental sustainability.	Ongoing
TR-I-1 Accommodating all modes. Plan, design and construct transportation projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists, people with disabilities, and persons of all ages and abilities.	Ongoing
TR-I-2 Thoroughfare types. Use the system of thoroughfare types established in this chapter to inform the design of (a) new streets and (b) improvements to existing streets.	Ongoing
TR-I-3 Make use of NACTO Design Guides. Make use of the NACTO (National Association of City Transportation Officials) Urban Street Design Guide and Urban Bikeway Design Guide as reference documents to help further define and establish standards for the thoroughfare types set forth in this Report.	Ongoing
TR-I-4 Transit priority. Ensure transit vehicles have priority over other vehicles along Avenue Q and Palmdale Boulevard, which are proposed Transit Corridor streets, prioritizing transit speed and schedule reliability.	Medium to Long
TR-I-5 Design standards for street connectivity. Establish standards requiring streets to interconnect within a development and with adjoining development, in order to disperse traffic, provide direct routes for cyclists and pedestrians, and allow for pedestrian-scale streets. Establish a basic maximum block perimeter standard of 1600 linear feet. Discourage cul-de-sacs or dead-end streets except where topographic conditions or barriers such as railroad quarters offer no practical alternatives. Require the provision of street stubs in developments on properties adjacent to open land and/or redevelopment sites to provide for future connections.	Short
TR-I-6 Pedestrian network. Create a safe, comfortable, and convenient pedestrian network that focuses on (a) safe travel; (b) improving connections between neighborhoods and commercial areas, and across existing barriers; (c) providing places to sit or gather, pedestrian-scaled street lighting, and buffers from moving vehicle traffic; and d) includes amenities that attract people of all ages and abilities.	Ongoing

TR-I-7	Bicycle network. Improve facilities and eliminate gaps along the bicycle network to connect destinations across the Study Area and create a network of bicycle facilities of multiple types, including protected bicycle lanes on streets, and off-street trails and passages. The network should facilitate bicycling for commuting, school, shopping, and recreational trips by riders of all ages and levels of experience.	Ongoing
TR-I-8	Traffic calming. Implement traffic calming measures on streets and at intersections, focusing on those with (a) high levels of pedestrian and bicycle activity; or (b) high levels of injury and/or fatality collisions.	Ongoing
TR-I-9	Wayfinding. Increase the convenience of walking, bicycling and driving by supporting the phased implementation of a comprehensive, consistent vehicular, bicycle and pedestrian wayfinding system connecting major destinations throughout the Study Area.	Medium to Long
TR-I-10	Minimize roadway widening. When feasible, avoid widening roadways to increase automobile capacity, and instead focus first on operational improvements such as signal timing optimization, modern roundabouts and other Transportation Systems Management (TSM) strategies that improve traffic conditions by maximizing the efficiency of existing vehicle infrastructure.	Ongoing
TR-I-11	Multimodal transportation impact fee. Adopt a transportation impact fee for new development that raises funds for improving all modes of transportation.	Short

PARKING & TRANSPORTATION DEMAND MANAGEMENT POLICIES

<i>Policy</i>	<i>Time Frame</i>
<p>TR-G-2 Manage, price, and set zoning code requirements for parking to achieve the following goals: maximizing transit, cycling and walking trips; minimizing motor vehicle trips; increasing social equity and housing affordability (by charging separately for parking, rather than hiding its cost in the cost of other goods and services); and minimizing paved surfaces, with their associated environmental costs (e.g., heat island effects, air and water pollution, and storm water runoff).</p>	Ongoing
<p>Policies for Managing On-Street Parking</p>	
<p>TR-I-12 Priorities for use of curb space. Adopt a clear hierarchy for the use of scarce curb space, prioritizing (in order from highest to lowest priority):</p> <ul style="list-style-type: none"> i. public safety measures, such as pedestrian safety measures and fire hydrant access; ii. pedestrian movement; iii. public transit; iv. bicycle facilities; v. active freight and passenger loading, including taxi stands; vi. short-term parking for people with disabilities; vii. short-term parking for all others; viii. long-term parking for shared vehicles, such as car share vehicles; ix. long-term parking for people with disabilities; x. long-term parking for existing residents; xi. long-term parking for all others. 	Medium
<p>TR-I-13 Curb parking occupancy goal. Adopt a goal of setting parking prices to ensure that curb parking is well used, but readily available. Set prices at the lowest rate required to ensure that at least one or two spaces per block are available most of the time (approximately an 85% occupancy rate).</p>	Medium to Long

<i>Policy</i>	<i>Time Frame</i>
TR-I-14 Parking pricing when warranted by demand. On each block, charge for parking whenever necessary – including evenings and weekends, if needed – to achieve the City’s occupancy goal (approximately 85% maximum occupancy per block).	Medium to Long
TR-I-15 Performance-based parking pricing. Implement performance-based parking pricing with rates that vary by time of day, day of week and by block.	Medium to Long
TR-I-16 Pricing rather than time limits. Use prices rather than time limits to achieve curb parking availability.	Medium to Long
TR-I-17 Curb parking privileges for existing residents. Grandfather in existing residents by providing them with parking permits allowing them to continue to park at the curb for free (or a nominal price) in their neighborhood. Charge non-residents and future residents for parking at rates that achieve the City’s occupancy goals.	Medium to Long
TR-I-18 Use of curb parking revenues. Dedicate all curb parking revenues to improve public facilities and services in the blocks where the parking revenue is generated, in order to sustain local support for parking pricing.	Medium to Long
TR-I-19 Establish commercial and residential parking benefit districts. Establish multiple parking benefit districts for the commercial and residential areas of the Study Area, in order to provide an institutional structure for returning curb parking revenue to the blocks where it was collected to fund neighborhood improvements.	Medium to Long
TR-I-20 Revenue return to parking benefit districts. Return curb parking revenues to the parking benefit district where the revenue is collected, to fund improved public infrastructure and services.	Medium to Long
TR-I-21 Advisory role for local organizations. Give existing merchant and neighborhood organizations, such as Business Improvement Districts, a significant advisory role in deciding how to spend their local parking benefit district’s revenues.	Medium to Long
TR-I-22 Technology deployment for managing curb and off-street parking. Improve parking monitoring and enforcement with integrated “smart” meters that accept credit cards and coins, pay-by-phone technologies, off-street Parking Access and Revenue Control Systems, and license plate recognition (LPR) systems.	Medium to Long

Policy	Time Frame
TR-I-23 Parking occupancy sensors. Evaluate emerging parking occupancy sensor technologies (in-ground and/or on-meter) and consider deploying them if and when current reliability, accuracy and cost problems are overcome.	Long
Policies for Managing Publicly-Owned Off-street Parking	
TR-I-24 Public parking district. Establish a public parking district to create public parking facilities, and thereby ensure the efficient sharing of parking between land uses with different times of peak parking demand. Designate the entire study area as a parking district (in legal terms), in order to allow the flexibility to establish public parking facilities anywhere they become needed. Finalize precise locations for public parking over time, as development proceeds, in order to provide parking when and where it is needed, in a process that is closely coordinated with land-use development.	Medium to Long
TR-I-25 Off-street Parking Enterprise Operation. Refrain from subsidizing automobile storage and use: require that City-owned lots and garages in downtown be operated as an Enterprise Operation, which pays for itself through user fees. As necessary, establish programs to allow retailers to reimburse the Enterprise Operation for valet parking for customers.	Medium to Long
TR-I-26 Off-street Parking Enterprise Operation Funding. Require that the Off-Street Parking Enterprise Operation support itself solely through lot and garage user fees, without additional support from other taxpayer dollars or curbside parking revenues. Plan and budget for the long-term financial sustainability of this Enterprise Operation, including setting parking rates which are sufficient to provide for long-term facility maintenance, renovation, reconstruction, and staffing.	Medium to Long
TR-I-27 Parking wayfinding. Develop an integrated wayfinding system for parking facilities, including both static and dynamic (changeable electronic display) signage to provide guidance and real-time parking availability information.	Medium to Long

Policy	Time Frame
Policies for Regulating Privately-Owned Parking	
To manage future growth in ways that minimize traffic congestion and pollution, while improving economic vitality and social equity, establish the following policies for regulating privately-owned parking:	
TR-I-28 Removal of minimum parking regulations. Amend the Zoning Ordinance to remove all minimum parking regulations in the Study Area, in order to allow the emergence of a more normal market for parking, where spaces are bought and sold, rented and leased, much like any other commodity.	Medium to Long
TR-I-29 Establish maximum parking requirements. Amend the Zoning Ordinance to establish maximum parking requirements for all land uses in the Study Area.	Medium to Long
TR-I-30 Unbundling of parking costs, carshare parking and provision of transit passes. Require new developments to: (a) unbundle the cost of parking from the cost of other goods and services; (b) offer carsharing agencies the right of first refusal for a limited number of parking spaces and require that those spaces be provided to the carsharing agencies free of charge; and (c) provide free deep-discount group transit passes for local bus service to the project's residents and/or employees.	Medium to Long
Additional Transportation Demand Management Policies	
To improve transportation choices, while minimizing congestion and pollution:	
TR-I-31 Cost-effective transportation demand management (TDM). Assess the most cost-effective mix of investments in pedestrian, bicycle, transit, ridesharing and parking infrastructure and services for meeting Palmdale's economic, environmental and social equity goals.	Medium to Long
TR-I-32 Development of TDM programs. Develop transportation demand management programs with clear, quantifiable goals for reducing parking costs, vehicle trips, and pollution.	Medium to Long
TR-I-33 Planning, funding and staffing TDM programs. Plan, fund, and staff TDM programs with the same clarity of purpose, level of expertise and seriousness normally accorded to a major parking garage construction project.	Medium to Long

<i>Policy</i>	<i>Time Frame</i>
TR-I-34 Funding TDM programs with parking revenue. Use a portion of parking revenues to fund TDM programs, focusing particularly on helping commuters leave their cars at home, in order to free up more space in future City-owned garages for high-priority, high-revenue hourly customer parking.	Medium to Long
TR-I-35 Deep-discount group transit pass programs. Establish deep-discount group transit pass programs to provide free local bus transit access for existing and future residents and employees. Consider using a portion of curbside parking revenues to fund them.	Medium to Long
TR-I-36 Enforcement of parking cash-out law. Encourage and enforce compliance with California’s parking cash-out law.	Medium to Long
TR-I-37 Transportation Management Association. Establish a Transportation Management Association for the Study Area, to improve traveler information about, marketing of, and employer participation in programs and services regarding walking, bicycling, ridesharing and transit.	Medium to Long

2.2 Thoroughfares

Thoroughfares form the bones of a city, serving as the foundation for its economy, culture, recreation, and the day-to-day lives of its citizens. This Report establishes a thoroughfare network for the Study Area and a system of thoroughfare types. The thoroughfare types described in this chapter include a broad range of pedestrian-friendly street types, ranging from major boulevards to minor alleys and lanes. This chapter also defines thoroughfare types that are reserved for bicycle and pedestrian use, such as trails.²

2.2.1 Thoroughfare Policies

TR-G-1 Build complete, attractive and multimodal streets that provide for the needs of diverse members of the community, safely provide for users of all modes of transportation, promote physical activity, and support environmental sustainability.

TR-I-1 Accommodating all modes. Plan, design and construct transportation projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists, people with disabilities, and persons of all ages and abilities.

² This plan uses the term thoroughfare in its broadest sense, defining a thoroughfare as a road or path or corridor forming a route between two places.

TR-I-2 Thoroughfare types. Use the system of thoroughfare types established in this chapter to inform the design of (a) new streets and (b) improvements to existing streets.

TR-I-3 Make use of NACTO Design Guides. Make use of the NACTO (National Association of City Transportation Officials) Urban Street Design Guide and Urban Bikeway Design Guide as reference documents to help further define and establish standards for the thoroughfare types set forth in this Report.

Additional useful references for bicycle and pedestrian-friendly street design include the Institute of Transportation Engineers' Designing Walkable Urban Thoroughfares: A Context Sensitive Approach; and Residential Streets: Third Edition, developed by the Institute of Transportation Engineers, the American Society of Civil Engineers, the National Association of Home Builders, and the Urban Land Institute.

TR-I-4 Transit priority. Ensure transit vehicles have priority over other vehicles along Avenue Q and Palmdale Boulevard, which are proposed Transit Corridor streets, prioritizing transit speed and schedule reliability.

Providing transit priority does not necessarily imply or require exclusive transit lanes, but normally includes establishing traffic signal prioritization for transit vehicles.

TR-I-5 Design standards for street connectivity. Establish standards requiring streets to interconnect within a

development and with adjoining development, in order to disperse traffic, provide direct routes for cyclists and pedestrians, and allow for pedestrian-scale streets. Establish a basic maximum block perimeter standard of 1600 linear feet. Discourage cul-de-sacs or dead-end streets except where topographic conditions or barriers such as railroad quarters offer no practical alternatives. Require the provision of street stubs in developments on properties adjacent to open land and/or redevelopment sites to provide for future connections.

For further guidance on establishing street connectivity standards, refer to Planning for Street Connectivity: Getting from Here to There (American Planning Association Planning Advisory Service Report No. 515), which provides both useful examples and explanation of the advantages of a more connected network. Note that in compact mixed-use districts with a more highly connected street network, residents do typically experience higher levels of traffic on their street than if they lived in a low-density detached single-family neighborhood with cul-de-sac streets. Most people who choose to rent or lease on a through street in a mixed-use neighborhood expect this, as one of the trade-offs that comes with living within easy walking distance of restaurants, cafés, shops, transit and other services. However, as described below, establishing a more highly-connected street network should be paired with the implementation of traffic calming measures on local and collector streets to control speeds and improve safety. On new streets,

traffic calming measures can be built into the design; on existing streets, retrofits may be required.

TR-I-6 **Pedestrian network.** Create a safe, comfortable, and convenient pedestrian network that focuses on (a) safe travel; (b) improving connections between neighborhoods and commercial areas, and across existing barriers; (c) providing places to sit or gather, pedestrian-scaled street lighting, and buffers from moving vehicle traffic; and d) includes amenities that attract people of all ages and abilities.

TR-I-7 **Bicycle network.** Improve facilities and eliminate gaps along the bicycle network to connect destinations across the Study Area and create a network of bicycle facilities of multiple types, including protected bicycle lanes on streets, and off-street trails and passages. The network should facilitate bicycling for commuting, school, shopping, and recreational trips by riders of all ages and levels of experience.

TR-I-8 **Traffic calming.** Implement traffic calming measures on streets and at intersections, focusing on those with (a) high levels of pedestrian and bicycle activity; or (b) high levels of injury and/or fatality collisions.

Manuals such as the Institute of Transportation Engineers' Traffic Calming: State of the Practice and Residential Streets: Third Edition provide further guidance the selection, design and implementation of appropriate traffic calming measures for both retrofitting existing streets, and building traffic calming into the design of new streets. Generally, collector streets should make use of measures which

control speeds while still accommodating expected traffic volumes, such as modern roundabouts, curb extensions, medians and pedestrian refuge islands. On local streets, where intended traffic volumes are lower, a wider range of measures may be used.

TR-I-9 **Wayfinding.** Increase the convenience of walking, bicycling and driving by supporting the phased implementation of a comprehensive, consistent vehicular, bicycle and pedestrian wayfinding system connecting major destinations throughout the Study Area.

TR-I-10 **Minimize roadway widening.** When feasible, avoid widening roadways to increase automobile capacity, and instead focus first on operational improvements such as signal timing optimization, modern roundabouts and other Transportation Systems Management (TSM) strategies that improve traffic conditions by maximizing the efficiency of existing vehicle infrastructure.

Because intersections are often the bottlenecks in the roadway system, installing measures such as modern roundabouts can sometimes resolve congestion problems without requiring widening the entire length of a corridor. Future planning and detailed design efforts (e.g., for new development projects) should take this into consideration. Note, however, that the intent of this policy is not to eliminate or reduce the responsibility of new developments to fund needed transportation improvements. As under current policy, new developments will remain responsible for building out the streets within and adjacent to the development

to their ultimate improved standard. Additionally, as described below, new developments will remain responsible for paying fair-share transportation impact fees to fund necessary off-site improvements.

TR-I-11 **Multimodal transportation impact fee.** Adopt a transportation impact fee for new development within the plan area, in order to raise funds for improving all modes of transportation.

When zoning ordinance provisions (e.g., height limits, floor-to-area ratios, and minimum parking requirements) limit development intensity, it may be adequate to simply have new developments fund any necessary widening of the immediately adjacent street frontages. However, the Land Use Plan allows substantially taller buildings and additional development rights on most parcels within the plan area. To help fund the substantial off-site transportation infrastructure needed to help offset the impacts of these more intense developments, a new impact fee, applicable within the project area, will be needed. This fee will help to fund key transportation improvements such as the proposed Avenue Q transit corridor, with its frequent bus rapid transit service, bicycle and pedestrian improvements, and motor vehicle capacity increases at key intersections. A nexus study will be required to help determine the appropriate fee level, and to establish the legally-required “nexus” (i.e., a reasonable relationship) between the fee levied on new development and the fair-share cost of the improvements needed to offset the development’s transportation impacts.

2.2.2 Thoroughfare Network & Types

THOROUGHFARE NETWORK

This chapter establishes a thoroughfare network for the Study Area, and defines a system of thoroughfare types. The Circulation Plan (Figure 2.2-3) applies these thoroughfare types to the Study Area, in a manner that considers the context of the surrounding land uses. The Circulation Plan provides a coherent and effective network, consisting of streets, transit corridors, and bicycle and pedestrian trails. The Circulation Plan also envisions transforming the existing street grid, which is currently comprised largely of long blocks with few through streets, into a highly connected and pedestrian-friendly street network.

Street Network

The current street network in the project area has approximately 1,000' long north-south blocks. This sparse street network funnels all trips onto the very limited number of through streets. To prevent such a network from becoming excessively congested as additional development occurs, the limited number of through streets would have to be designed as wide, six to eight-lane arterials, which by their nature would be generally unpleasant and uncomfortable for walking, cycling and transit access. To avoid this problem, the Thoroughfare Policies in this chapter will result in the addition of more streets to the network over time, to form a fine-grained street grid with short, pedestrian-friendly urban blocks. As shown in the Circulation Plan, numerous additional streets would eventually be added, particularly in the vicinity of the future Avenue Q corridor. *The dotted lines*

indicating the location of future streets are conceptual, and do not necessarily indicate precise locations for future streets.

Providing a flexible street and block network in the Avenue Q corridor area is particularly important. The Circulation Plan provides a highly connected street grid with short urban blocks in this area. This pattern, which is similar to the pattern seen in many traditional downtowns, has proven itself to be both flexible and adaptable to many possible corridor designs, and highly supportive of transit-oriented development. Future streets will be created over time using both of the following methods:

- Key access streets (e.g. crucial access routes) will be developed through a combination of land purchases and/or easements obtained as a condition of future development.
- Additional connections will be created over time by establishing maximum block perimeter standards for new development. Typically, block perimeter standards are applied only to larger parcels (e.g. to developments of four acres or more).

The maximum block perimeter standard should be designed to facilitate the creation of a connected street pattern that relates to Palmdale's existing street and lot pattern, while providing more connections and shorter blocks. The recommended basic maximum block perimeter standard of 1600 linear feet allows, for example, for blocks of up to 300 feet in width by 500 feet in length, a scale which is at the upper end of the range typically observed in America's traditional walkable cities and streetcar suburbs.³

³ For further guidance on developing a specific standard, refer to *Planning for Street Connectivity: Getting from Here to There* (American Planning Association Planning Advisory Service Report No. 515).

On parcels that may initially be developed with auto-oriented uses, such as big-box retail stores, maximum block perimeter standards should be applied to the development's "streets" in a manner that facilitates future redevelopment. For example, requiring that a big-box center's buildings and parking lots be laid out as blocks with streets, following the block perimeter standards (with the streets initially serving as parking lot aisles, and all significant utility lines placed under them) allows easy conversion of these uses to denser, higher value, walkable mixed-used districts when land values rise. The recent redevelopment of the big-box retail district in the Kentlands (Gaithersburg, MD) is a notable example of the successful use of this approach.⁴

It is worth noting that because new developments must already provide fire lanes and parking lot aisles, introducing block perimeter standards for large new developments typically requires little or no additional land: instead, asphalt and concrete which would be required in any event to provide necessary fire and parking access is reconfigured in the form of a complete street network.

Bicycle and Pedestrian Network

All of the streets in the project area would be designed to be safe and welcoming for cyclists and pedestrians of all ages, from an eight year-old child to an 80 year-old grandmother. Major streets would be provided with cycle tracks (a.k.a. protected bicycle lanes), as shown in Figures 2.2-1 and 2.2-2. All streets would be provided with ample, shaded sidewalks, or designed as shared streets. Additionally, bicycle and pedestrian trails would be

⁴ For further information, see: <https://www.cnu.org/publicsquare/light-rail-and-real-downtown-kentlands>.

provided throughout the open space corridors, creating a safe and pleasant network. These off-street trails would supplement the extensive network of on-street bicycle facilities.

Funding Maintenance of the Public Realm

Providing a better public realm, with more street trees, wider sidewalks, pedestrian-scale lighting, cycle tracks, open space corridors, and welcoming public spaces, requires not just building these spaces, but also maintaining them. To raise the ongoing funding required, one or more funding mechanisms (such as a Lighting and Landscape Maintenance District, a Property-based Business Improvement District, and/or a Community Facilities District) will need to be established for the plan area. It is worth noting that while this will mean an additional expense for property owners (e.g., future condominium residents), it also provides value. Residents in mixed-use districts generally spend more time in and rely more on public spaces, such as neighborhood parks, which are owned and maintained in common; and rely less and spend less on private amenities, such as building and maintaining private yards.

ROADWAY EXPANSIONS

To accommodate the full build-out of the land use development permitted under the Land Use Plan, this chapter provides for widening a number of roadways and modifying intersections (e.g., signalization). The *Palmdale TOD Overlay Zone Transportation Impact Analysis (TIA)* projects that the following roadway and intersection expansions will eventually be needed to accommodate the full build-out of both the Palmdale TOD Overlay Zone Land Use Framework Plan and the Avenue Q Land Use Framework Plan. The TIA, however, makes

conservatively high assumptions about the number of motor vehicle trips that may be generated in the future, and may overstate future traffic volumes. Because such expansions are both costly, and may or may not (depending upon the effectiveness of the transit network, the effectiveness of the transportation demand management measures proposed in this Report, technological advances, and other possible future developments) ever be needed, such expansions should be constructed only when warranted. The proposed roadway network changes are summarized below and in **Error! Reference source not found.** :

- **Palmdale Boulevard**
 - Increase to eight lanes, with turn pockets as needed at selected intersections.
 - Increase the number of through lanes westbound at Division Street to five lanes to the freeway ramps.
- **SR-14 Ramps at the Palmdale Boulevard/SR 14 Interchange:** Restripe existing paved roadway to assign two lanes to the northbound and southbound ramps. This may require construction of additional pavement width on Palmdale Boulevard to install an additional turn pocket.
- **Sierra Highway, realigned to the 4th Street East alignment:** Sierra Highway will be realigned to the 4th Street East alignment, and widened to six lanes with left turn pockets at intersections. This realignment will allow the City to provide economic opportunities, improved circulation and create better transit-oriented development zones. It will provide important arterial access to the station from the freeway, reduce pressure on other nearby North-South roadways, and provide more direct connections.

- **Division Street:** Increase to four lanes with left turn pockets at intersections.
- **Trade Center Drive:** Can be reduced to two lanes with left turn pockets at intersections; consider a three lane road with two way left turn lanes.
- **Technology Drive/Avenue P-8:** The intersection at the realigned Sierra Highway will have two left turn pockets and one right turn pocket.
- **5th Street West:** Maintain four lanes and left turn pockets at intersections.
- **Avenue Q:** Reconstruction of Avenue Q into a high-capacity transit corridor will require a two lane roadway with left turn pockets and protected left turn phasing to accommodate a center running transit-only lane.

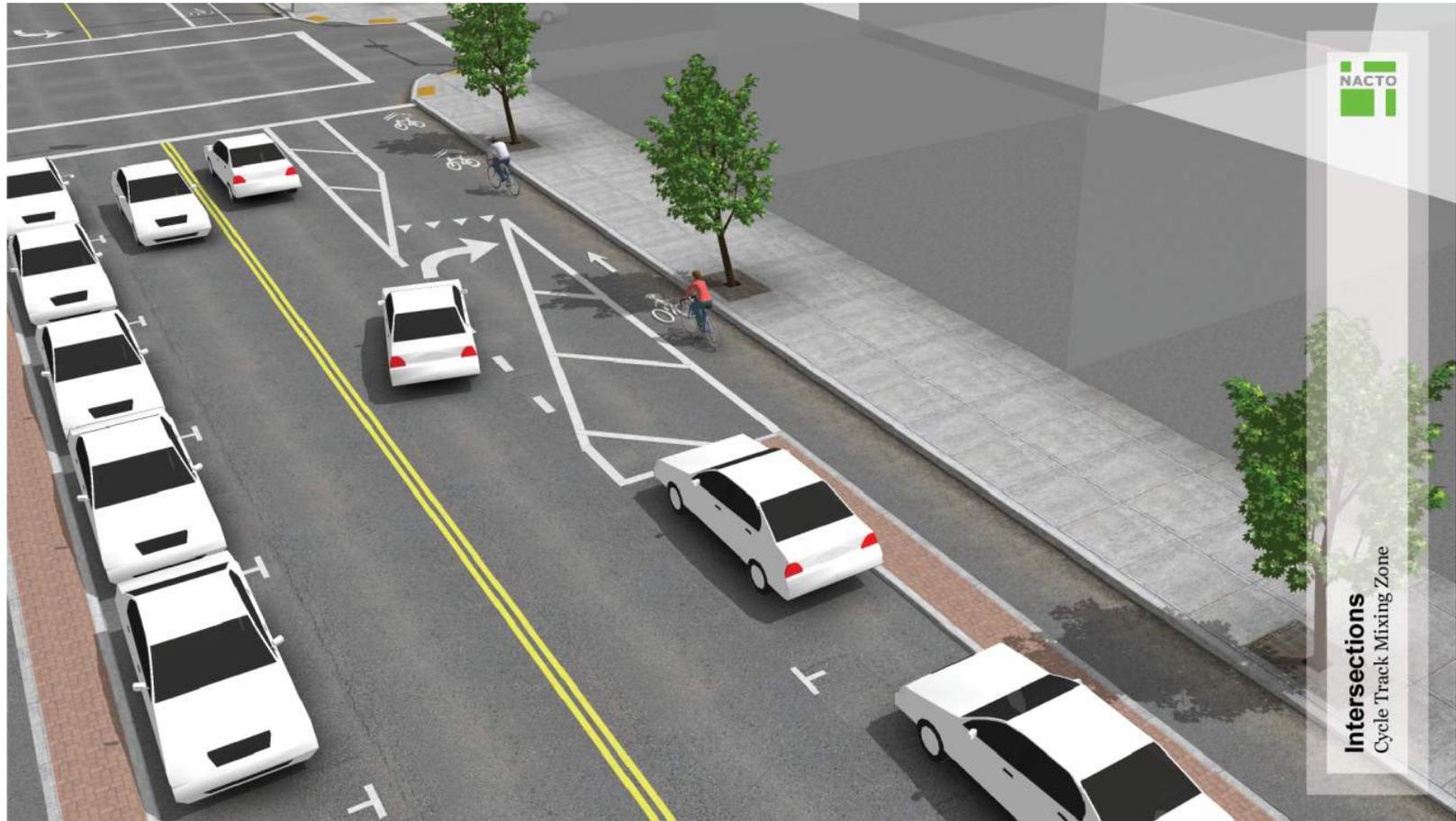
For a full description of the proposed roadway and intersection modifications (including maps and diagrams of proposed lane configurations at each study intersection), refer to the TIA report. The TIA report also provides detailed analysis of traffic volumes, levels of automobile delay at significant intersections, and analysis of potential bicycle, pedestrian and transit impacts of both Land Use Plans.

Figure 2.2-1: Cycle Track



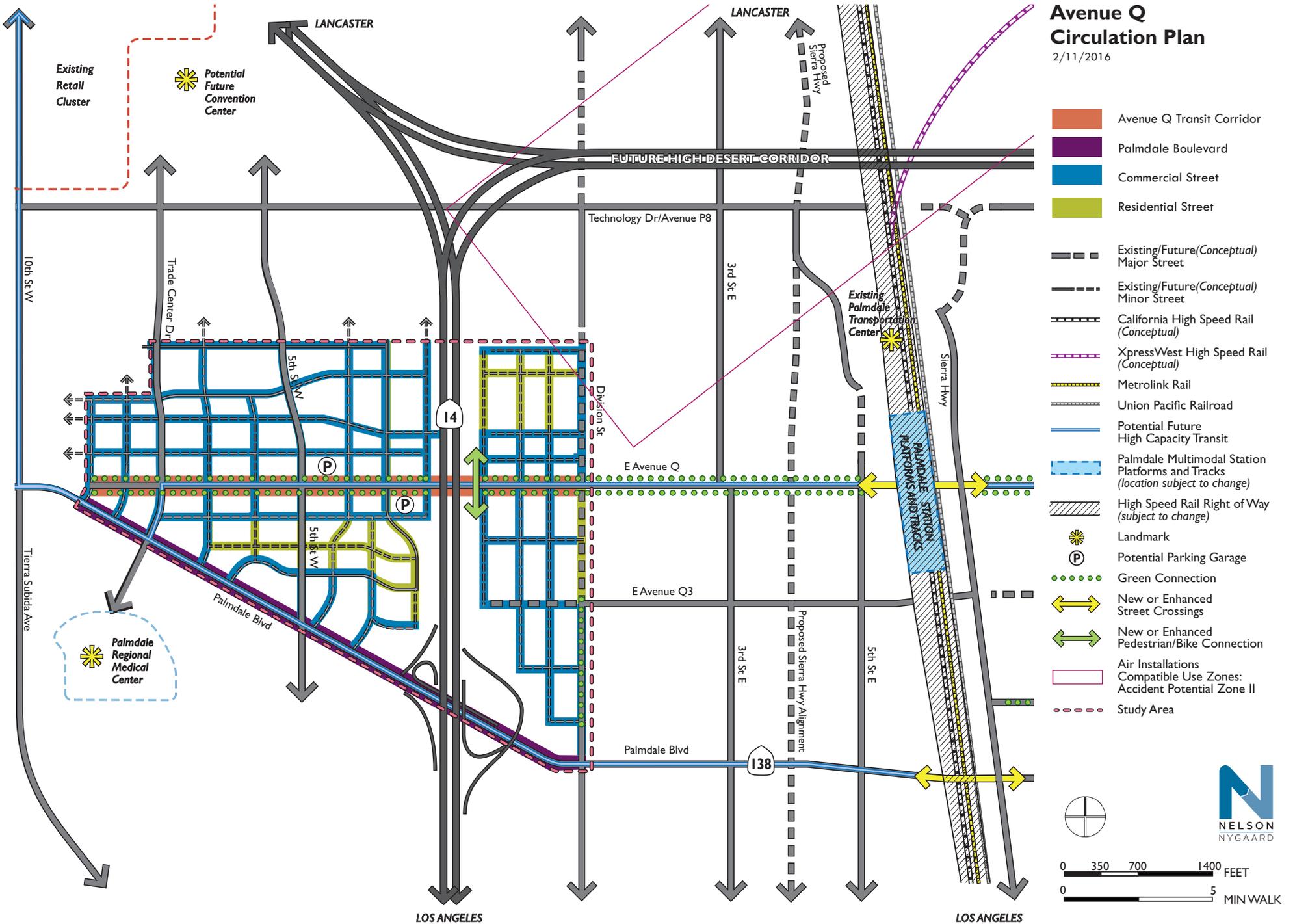
Source: National Association of City Transportation Officials Urban Bikeway Design Guide

Figure 2.2-2: Cycle Track Treatment at Intersection



Source: National Association of City Transportation Officials Urban Bikeway Design Guide

**Figure 2.2-3
Avenue Q
Circulation Plan**
2/11/2016



- Avenue Q Transit Corridor
- Palmdale Boulevard
- Commercial Street
- Residential Street
- Existing/Future(Conceptual) Major Street
- Existing/Future(Conceptual) Minor Street
- California High Speed Rail (Conceptual)
- XpressWest High Speed Rail (Conceptual)
- Metrolink Rail
- Union Pacific Railroad
- Potential Future High Capacity Transit
- Palmdale Multimodal Station Platforms and Tracks (location subject to change)
- High Speed Rail Right of Way (subject to change)
- Landmark
- Potential Parking Garage
- Green Connection
- New or Enhanced Street Crossings
- New or Enhanced Pedestrian/Bike Connection
- Air Installations Compatible Use Zones: Accident Potential Zone II
- Study Area

**NELSON
NYGAARD**

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TABLE 2.2-1: PROPOSED ROADWAY NETWORK CHANGES						
Street/Interchange Name	Limits (To/From)	Scenario	Roadway Classification (Existing vs. Proposed)	Planned Right-of-Way at Build-out (Existing vs. Proposed)	# of Lanes (Existing vs. Proposed)	Intersection Changes Proposed
Palmdale Boulevard	Medical Center Drive to 10th Street East	Existing	Regional Arterial/Major Arterial	126'/104'	6 with turn pockets	
		Proposed	Downtown Thoroughfare	114'	8 with turn pockets	5 lanes westbound at Division Street
Palmdale Boulevard/SR 14 Interchange	Within limits of the interchange	Existing	Regional Arterial	126'	6 with ramps	
		Proposed	Downtown Thoroughfare	126'	8 with ramps	2 lane on & off-ramps
Sierra Highway	Rancho Vista Boulevard to Palmdale Boulevard	Existing	Major Arterial	104'	4 with turn pockets	
		Proposed	Downtown Thoroughfare	104'	6 with turn pockets	
Division Street	Rancho Vista Boulevard to Palmdale Boulevard	Existing	Major Arterial	104'	2	
		Proposed	Downtown Thoroughfare	104'	4 with turn pockets	
Trade Center Drive	Auto Center Drive to Palmdale Boulevard	Existing	Secondary Arterial	84'	4 with turn pockets	
		Proposed	Downtown Thoroughfare	84'	2 with turn pockets	
Technology Drive/Avenue P-8	SR 14 to 10th Street East	Existing	Major Arterial	104'	4 with turn pockets	1 LT + 1 RT pocket at Sierra Highway
		Proposed	Downtown Thoroughfare	128'	4 with turn pockets	2 LT + 1 RT pocket at Sierra Highway
5th Street West	Technology Drive/Avenue P-8 to Palmdale Boulevard	Existing	Major Arterial	100'	4 with turn pockets	
		Proposed	Downtown Thoroughfare	104'	4 with turn pockets	
Avenue Q	10th Street West to 10th Street East	Existing	Major Arterial/Secondary Arterial	104'/84'	2 with turn pockets	
		Proposed	Transit Corridor	142'	2 with turn pockets with 2 lane transit way	Protected only LT phasing (for transit)

UPDATING CITY STREET STANDARDS

In recent years, many agencies, ranging from the Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans) to local municipalities, have modernized their street standards to reflect the findings of recent traffic safety research.

For example, the FHWA recently issued new guidance updating the controlling criteria for the design of streets on the National Highway System (NHS).⁵ The NHS includes both freeways and many city streets which receive federal funding. In 1985, the FHWA established 13 controlling criteria for the design of projects on these streets, and required extensive documentation for projects seeking exceptions from any of these criteria. These 13 design criteria included factors such as lane width, shoulder width, and lateral offset to obstructions.

According to the agency, “Recent research, culminating in publications of the most recent Highway Capacity Manual (2010, Transportation Research Board) and the Highway Safety Manual (2010, AASHTO), developed much greater knowledge of the traffic operational and safety effects of the controlling criteria than was available when they were established. The NCHRP Report 783 “Evaluation of the 13 Controlling Criteria for

Geometric Design” (2014) specifically examined the safety and operational effects of the existing controlling criteria.”⁶

The result of this recent research was significant change in the agency’s criteria for designing city streets. For roadways with a design speed of less than 50 mph, the FHWA’s new guidance reduces the controlling criteria to just two: design loading structural capacity and design speed.

According to the FHWA, “The shift in FHWA’s approach was prompted by current research in the field of geometric design showing that the majority of the 13 design criteria yielded significant benefits only on higher speed roadways.”⁷ “Higher speed” NHS roadways are defined as freeways and other roadways with a design speed greater than or equal to 50 mph. Regarding city streets with design speeds of less than 50 mph, the FHWA reports, “NCHRP Report 783 found that the 13 controlling criteria had minimal influence on the safety or operations on urban streets.”

⁵ Mooney, Robert B. “Revisions to the Controlling Criteria for Design and Documentation for Design Exceptions.” Federal Highway Administration, May 5, 2016. Accessed June 21, 2016. file:///C:/Users/psiegman.NN/AppData/Local/Temp/Revisions_to_the_Controlling_Criteria_for_Design_and_Documentation_for_Design_Exceptions.pdf.

⁶ Federal Highway Administration. “Federal Register | Revision of Thirteen Controlling Criteria for Design; Notice and Request for Comment,” October 7, 2015. Accessed June 21, 2016. <https://federalregister.gov/a/2015-25526>.

⁷ Federal Highway Administration. “Press Release: FHWA Move to Encourage Highway Design Flexibilities Kicks Off with Changes for Lower Speed Roads, 10/7/2015 | Federal Highway Administration,” October 7, 2015. http://www.fhwa.dot.gov/pressroom/fhwa1566.cfm?utm_source=twitterfeed&utm_medium=twitter.

Regarding lane widths on urban and suburban arterial streets, for example, National Cooperative Highway Research Program (NCHRP) Report 783 arrived at the following conclusions:⁸

- “Chapter 12 (Urban and Suburban Arterials) of the HSM [2010 AASHTO Highway Safety Manual] does not include a CMF [Crash Modification Factor] for lane width on urban and suburban arterials.”
- “Recent research by Potts et al. (23, 24) under NCHRP Project 03-72 found no difference in safety performance for urban and suburban arterials in lane widths ranging from 10 to 12 ft., with only limited exceptions that could represent random effects.”
- “On roadways with speeds of 45 mph or less, there are often good reasons for using narrow lanes as a flexibility measure to obtain other benefits: shorter pedestrian crossing distances, inclusion of turn lanes, medians, bicycle lanes, etc.”
- In summary, the report concludes, on urban and suburban arterial streets, “Lane width does not appear to affect crash frequency or severity.”

This transportation report recommends updated street designs for the plan area, which draw upon the conclusions of NCHRP Report 783’s safety research, the FHWA’s updated design guidance, and other recent safety research. One critical issue is

⁸ Harwood, Douglas W. Evaluation of the 13 Controlling Criteria for Geometric Design. NCHRP National Cooperative Highway Research Program Report 783. Washington, DC: Transportation Research Board of the National Academies, 2014. Accessed June 21, 2016.
http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_783.pdf.

the selection of appropriate design speeds. In the complex environment of city streets – particularly in walkable, transit-oriented districts where a high level of pedestrian activity is both expected and encouraged – adopting a proactive design approach that explicitly focuses on the goal of reducing speeds “may be the single most consequential intervention in reducing pedestrian injury and fatality.”⁹ Design speeds for all streets within the plan area, with the exception of limited access freeways, should be selected using the concept of *target speed*. *Target speed* is the speed that the designer intends for drivers to go, rather than operating speed. The maximum target speed for urban arterial streets is 35 mph, while the maximum target speed for urban collector or local streets is 30 mph.¹⁰

Regarding lane widths, for example, 10 foot wide travel lanes are recommended for several street types, since: (a) the most recent traffic safety research finds no improvement in safety performance on urban streets for wider lane widths; (b) on existing streets (e.g., Palmdale Boulevard), using 10 foot lanes allows room for benefits such as bicycle lanes; and (c) on new streets, using 10 foot lanes reduces capital and maintenance costs, while providing benefits such as shorter pedestrian crossing distances and reduced heat island effects.

Similarly, this report recommends relatively new geometric design features, such as separated bicycle lanes, which have only

⁹ Dumbaugh, Eric, and Li, Wenhao. “Designing for the Safety of Pedestrians, Cyclists and Motorists in Urban Environments.” *Journal of the American Planning Association*. 77:1 (2011): 69-88.

¹⁰ Institute of Transportation Engineers. *Designing Walkable Urban Thoroughfares: a Context-Sensitive Approach*. Washington, DC: Institute of Transportation Engineers, 2010. Chapter 7.

recently been endorsed by FHWA, Caltrans and many local jurisdictions. Note that some streets within the project area are currently under the control of Caltrans: adopting some features recommended in this report on those streets, such as 10 foot lane widths, may require either going through the Caltrans design exception process; waiting for Caltrans to update its standards to reflect recent research (as recently occurred for separated bicycle lanes); or having Caltrans relinquish ownership of these streets to the City (an approach which several municipalities have adopted, but which has the disadvantage of requiring the City to take on ongoing maintenance costs for the street).

THOROUGHFARE TYPES

The Transportation Report establishes the following street types for use in the Study Area. The following seven street types are intended for use in busier and primarily commercial areas:

- Transit Corridor
- Downtown Thoroughfare
- Downtown One-Way Street
- Downtown Two-Way Street
- Neighborhood Main Street
- Commercial Shared Street
- Commercial Alley

An additional five street types are provided for use in areas which are primarily residential:

- Residential Boulevard

- Neighborhood Street
- Yield Street
- Residential Shared Street
- Green Alley

Finally, an additional thoroughfare type is provided for off-street trails and paths:

- Trail

The following pages provide illustrations and brief descriptions of each type. All are Complete Streets, whose design is supportive of motorists, cyclists, pedestrians, and transit riders. Additional definition and design details for each of these street types are provided in the National Association of City Transportation Officials (NACTO) *Urban Street Design Guide* (USDG) and the NACTO *Urban Bikeway Design Guide* (UBDG).¹¹ The NACTO guides classify urban streets according to their form and function, and provide detailed guidance for developing Complete Streets that are fully supportive of transit-oriented development.

¹¹ For further information, see: <http://nacto.org/usdg/> and <http://nacto.org/cities-for-cycling/design-guide/>. Both design guides have been endorsed by the Federal Highway Administration (FHWA) and Caltrans, as well as numerous other cities, counties, states and professional organizations. For further information on FHWA and Caltrans support for these manuals, see: http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design_guidance/design_flexibility.pdf http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design_guidance/design_flexibility.cfm <http://www.dot.ca.gov/hq/oppd/design/2014-4-2-Flexibility-in-Design.pdf>

Additionally, the Institute of Transportation Engineers' *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*; and *Residential Streets: Third Edition*, developed by the Institute of Transportation Engineers, the American Society of Civil Engineers, the National Association of Home Builders, and the Urban Land Institute, are useful design references. The pages below provide more specific descriptions of the concepts proposed for several key streets in the study area, such as Avenue Q.

The Transit Corridor Street Type

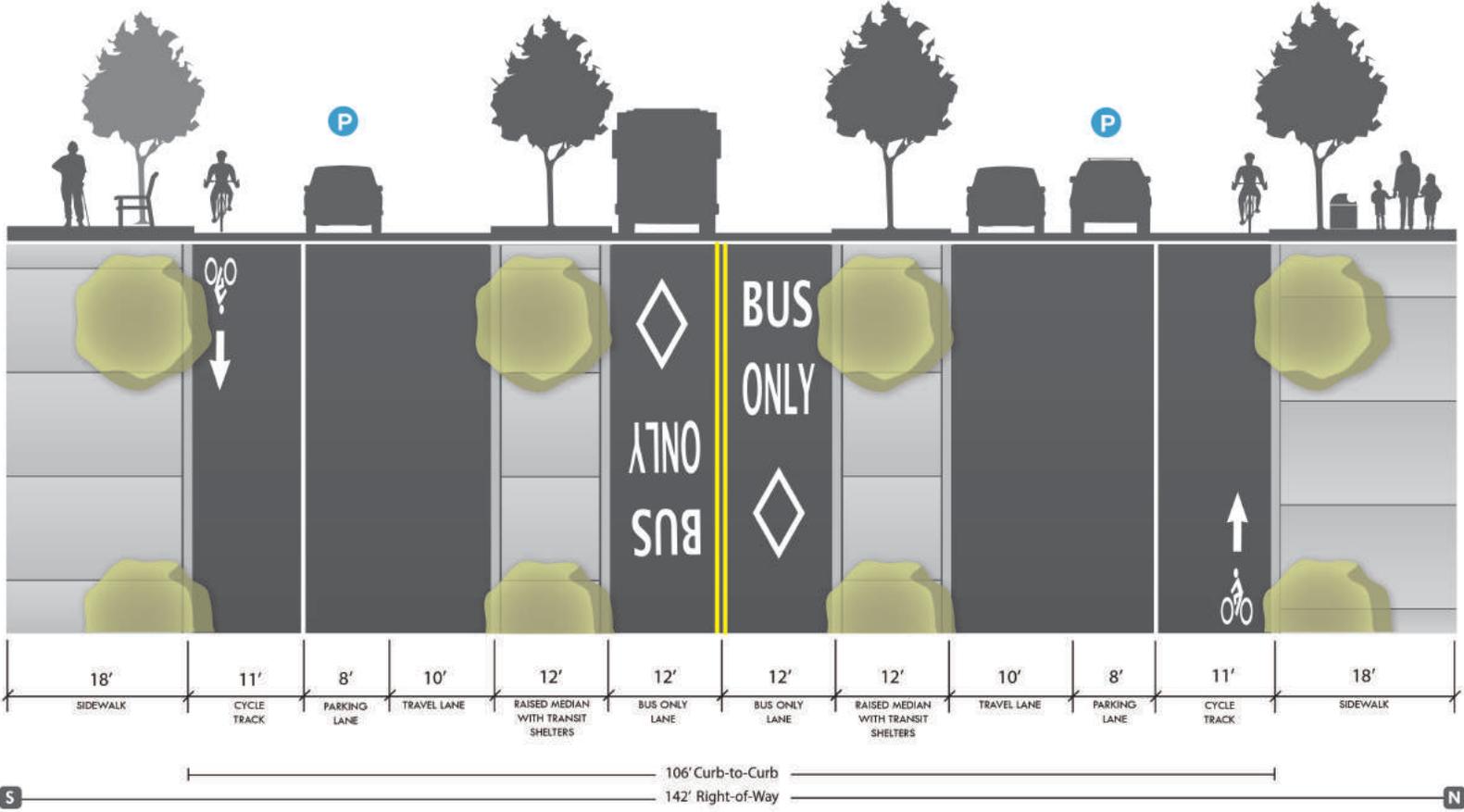
The Transit Corridor street type is designed to support high-capacity and high-quality transit service. Figure 2.2-4 illustrates an example of the Transit Corridor street type.

Figure 2.2-4: Transit Corridor



Transit corridors that support bus, bus rapid transit, light rail, and streetcars should feature design that ensures high quality transit service that integrates with bicycle and pedestrian connections. Pedestrian improvements, such as high quality shelters, curb extensions and high visibility crossings, are key in corridors with multiple surface stops. (Source: NACTO Urban Street Design Guide)

Figure 2.2-5: Avenue Q Transit Corridor, Conceptual Cross-Section



The Circulation Plan designates Avenue Q as a Transit Corridor street type. Figure 2.2-5 provides a conceptual cross-section for the Avenue Q Transit Corridor. This Report proposes that initially, the Avenue Q Transit Corridor would be developed as a Bus Rapid Transit (BRT) Line with exclusive transit lanes running in a center median (as shown in the illustration above). Features such as exclusive bus lanes, transit signal priority, level boarding, typical minimum distances of one-half mile to one mile between stops, high-quality ‘stations’ at each stop for waiting passengers, and minimum headways of 15 minutes would provide fast, frequent and reliable service. In the future, if demand warranted, rail transit could be introduced on the corridor to provide additional passenger capacity.

As described in the Land Use Plan, the goal for Avenue Q is to facilitate the development of mixed-use buildings with active, sidewalk oriented uses on the ground floor and apartments and condominiums above. To achieve this, the Land Use Plan generally prohibits the introduction of new driveways along Avenue Q, and requires that parking structures and lots be located behind buildings, so as not to detract from the pedestrian-oriented streetscape. Access to parking will be provided from the side streets, rear alleys, and additional east-west streets running parallel to Avenue Q, on both the north and south sides of the corridor. This will allow Avenue Q to develop into a traditional American Main Street form, with wide sidewalks, continuous shopfronts and an unbroken pedestrian strolling experience in the mixed-use portions of the corridor.

At most intersections, left turns from Avenue Q onto side streets will be prohibited, in order to reduce congestion and maintain transit running speeds. However, left turn access will be provided

at intervals of at least every one-half mile, and through movements on north-south cross streets will remain permitted.¹²

What is Bus Rapid Transit (BRT)?

Bus Rapid Transit (BRT) is an innovative, flexible, and high performance transit mode that uses buses or specialized vehicles on roadways or dedicated lanes to quickly and efficiently transport passengers to their destination. BRT systems can equal or exceed the performance of most rail systems but at a fraction of the cost due to reduced construction, infrastructure, and maintenance needs. Common features of a bus rapid transit system that are different from most conventional bus systems include:

- High-capacity vehicles
- Exclusive bus lanes separated from other roadways
- Rail-like station amenities with level boarding platforms
- Rail-like spacing between stations for fewer stops and express travel times
- More frequent service
- Traffic signal priority

¹² Note that in urban areas with a grid street pattern, limiting left turns from major streets onto side streets is a common practice. Examples include Pasadena's Colorado Boulevard; and Divisadero, Market, Masonic and Van Ness Avenues in San Francisco. In a traditional connected grid, motorists on a major street who wish to access a side street, where a left turn from the major street is not permitted, typically either: (a) turn left before or after the side street, or (b) go around the block, by making three right turns. It is worth noting that in a conventional suburban cul-de-sac pattern, the question of turning left onto many side streets never arises, because most side streets do not directly connect through to the major street.

- Real-time passenger location and schedule information
- Off-vehicle fare collection

An Example: Los Angeles County's Orange Line

The Metro Orange Line is one of the first full-featured BRT systems anywhere in the United States. In 1991, Metro used \$44.8 million in Proposition 108 funds (the Passenger Rail and Clean Air Bond Act of 1990) to purchase an abandoned railroad line parallel to the Ventura Freeway (U.S. 101). Initially, Metro considered building rail in the corridor, but this was deemed infeasible both politically and as a result of Metro's decline in revenue at the time.

After a successful Metro Rapid Demonstration Program of street-running rapid bus services, Metro proposed building a BRT line, which was highly contested by some neighborhood groups who fought against its development. With a \$324 million construction cost, the Metro Orange Line opened in October 2005 as a fourteen mile route primarily consisting of a two-lane dedicated busway, operating sixty-foot articulated vehicles powered by compressed natural gas. The route crosses thirty-four streets and five midblock pedestrian crosswalks. At signalized intersections, it has loop detectors installed to give Orange Line vehicles traffic signal priority. In order to mitigate noise impacts on adjacent neighborhoods, it operates on rubberized asphalt with sound walls on portions of the busway. Adjacent to the busway, Metro has built eight miles of bicycle and pedestrian paths, with designated on-street bike lanes for the remaining six miles. There is extensive landscaping along the corridor.

On June 30, 2012, a four-mile spur was opened off of the main line, toward the north from a point near its western end. This extension utilizes a continuation of the same former rail right-of-way used by the original segment.

The Orange Line Today

The Orange Line has proven to be one of Metro's most successful routes, outperforming other Metro Rapid transit lines. As of December 2014, ridership on the Orange line averaged 25,000 per weekday. The Orange Line has exceeded ridership projections, reduced travel times, and eased congestion within the San Fernando Valley. It has also provided greater access to destinations in the Valley and attracted new riders. Metro's Orange Line serves as an example of what transit agencies can do to feasibly implement sustainable rapid transit through the cost-effective option of BRT.

The Orange Line operates seven days a week, twenty-two hours per day. Vehicles depart every four minutes during the morning and evening peaks. During off-peak hours and on weekends, headways range from ten to twenty minutes. The Orange Line also accommodates a series of transit connections. The busway connects to the Metro Rail Red Line subway terminus at North Hollywood. When developing the Orange Line, Metro rerouted several bus lines in the area and added buses to several north-south lines in order to ease transit connections with the Orange Line. Orange Line schedules are coordinated with the Red Line to facilitate transfers.

The fourteen original Orange Line stations are spaced approximately one mile apart, and they are located near residential areas, commercial activity centers, and major north/south arterials. Each station provides bicycle racks and/or

lockers, covered seating, telephones, lighting, and security cameras. Stations also feature variable message signs and real-time bus arrival information. Overall, the Orange Line provides a level of service and performance that is often associated with much more expensive rail systems.

For more information about the Orange line:

William Vincent and Lisa Callaghan, A Preliminary Evaluation of the Metro Orange Line Bus Rapid Transit Project, April 2, 2007.

http://www.gobrt.org/Orange_Line_Preliminary_Evaluation_by_BTI.pdf.

Los Angeles County Metropolitan Transportation Authority (Metro) Ridership Statistics, December 2014.

<http://www.metro.net/news/ridership-statistics/>. Accessed January 19, 2015.

Palmdale Boulevard: a Boulevard Street Type and a Future High-Capacity Transit Corridor

Palmdale Boulevard is currently designated in the City's General Plan as a Major Arterial Roadway, and will in the future carry a significant share of the motor vehicle traffic traveling to and from the Study Area. To accommodate the eventual full buildout of the Land Use Plan, this Report proposes to expand motor vehicle capacity by widening the street to eight through lanes. The Land Use Plan and this Report also envision Palmdale Boulevard being redeveloped over time into a high-capacity transit corridor with a new Bus Rapid Transit line, as proposed in the Antelope Valley Transit Authority's recently completed *Comprehensive Operational Analysis & Ten-Year Plan*.¹³ The new

line, however, is envisioned to generally operate in mixed-flow traffic with signal prioritization, rather than in exclusive transit lanes.

Figure 2.2-6 provides a conceptual typical cross-section of the proposed Palmdale Boulevard. In order to maintain compliance with the City's current automobile Level of Service standards, the street would be ultimately widened to eight lanes, with turn pockets as needed at selected intersections. Additionally, the number of through lanes westbound would increase at Division Street to five lanes, and continue at this width up to the SR-14 freeway ramps.

As Figure 2.2-6 shows, the typical cross-section would provide eight through lanes, a central median/turn lanes, bicycle lanes and sidewalks, all fit within a 114 foot right-of-way. This is the City's standard right-of-way width for a Major Arterial with bicycle lanes. In order to achieve this number of lanes within just 114 feet, 10 foot wide travel lanes are used, as is frequently done in constrained urban areas. However, at present, Palmdale Boulevard's existing right-of-way ranges between approximately 100 feet wide (in the most constrained sections) and 140 feet wide (in sections where the street includes a frontage road). Therefore, achieving this right-of-way width throughout the corridor will require some right-of-way acquisition by the City (either through purchase, or via dedications of land as redevelopment of properties along Palmdale Boulevard takes place. Alternately, the City retains discretion to approve

¹³ Antelope Valley Transit Authority. *Route to Success: Antelope Valley Transit Authority Comprehensive Operational Analysis & Ten-Year Plan*. Antelope

Valley Transit Authority, November 2014.
<http://www.avta.com/modules/showdocument.aspx?documentid=946>.
Accessed January 15, 2015.

narrower, less land-consumptive street and right-of-way widths, particularly in constrained segments with existing buildings.

Additionally, because the street is a Caltrans roadway, specific design dimensions will need to be negotiated and agreed upon with Caltrans during future design phases. Ordinarily, Caltrans standards call for wider travel lane widths (e.g., 11 feet or more). However, in constrained situations on existing urban roadways, Caltrans has previously agreed to more slender lane widths.

One example is the redesign of Van Ness Avenue (US 101) in San Francisco, where Caltrans has agreed to lane widths of less than 11 feet in order to make room for exclusive bus lanes and landscaped, tree-lined medians. Caltrans has been increasingly amenable to such changes, because agency priorities have shifted to emphasize increasing bicycle, pedestrian and transit use on Caltrans roadways; and because in recent decades, traffic safety research has demonstrated that on urban streets with design speeds of 50 miles per hour or less, travel lane widths of 11 or 12 feet generally offer no safety advantage over 10 foot lanes.

The Downtown Thoroughfare Street Type

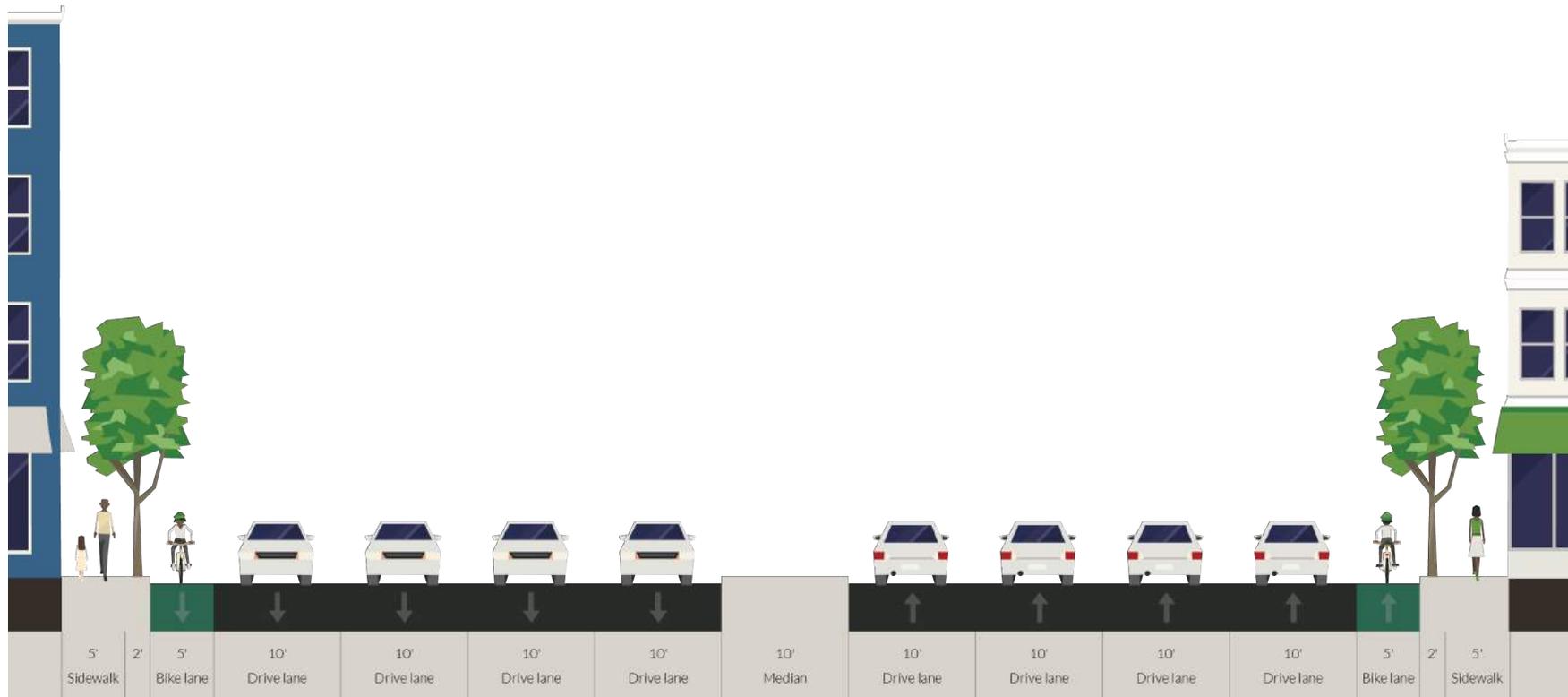
The Downtown Thoroughfare street type is used to connect neighborhood centers and other major destinations.¹⁴ The type (illustrated conceptually in Figure 2.2-7) is designed to provide significant motor vehicle capacity, while also comfortably accommodating street-facing buildings, pedestrians, cyclists and

transit riders with parking (to buffer cyclists and pedestrians from traffic), cycle tracks, landscaped medians, and shaded sidewalks. Parking may be omitted in areas with little or no parking demand.

Technology Drive/Avenue P-8 would be redeveloped as a Downtown Thoroughfare street type, as shown conceptually in Figure 2.2-8. In blocks of the avenue with little demand for parking, such as industrial areas, on-street parking would be omitted.

¹⁴ While the NACTO *Urban Street Design Guide* refers to this type as the “Downtown Thoroughfare” street type, it is useful and applicable for a broad range of urban applications, and is therefore recommended for use in some parts of the Study Area which are outside of the area designated in the General Plan as Palmdale’s Downtown.

Figure 2.2-6: Palmdale Boulevard, Conceptual Cross-Section



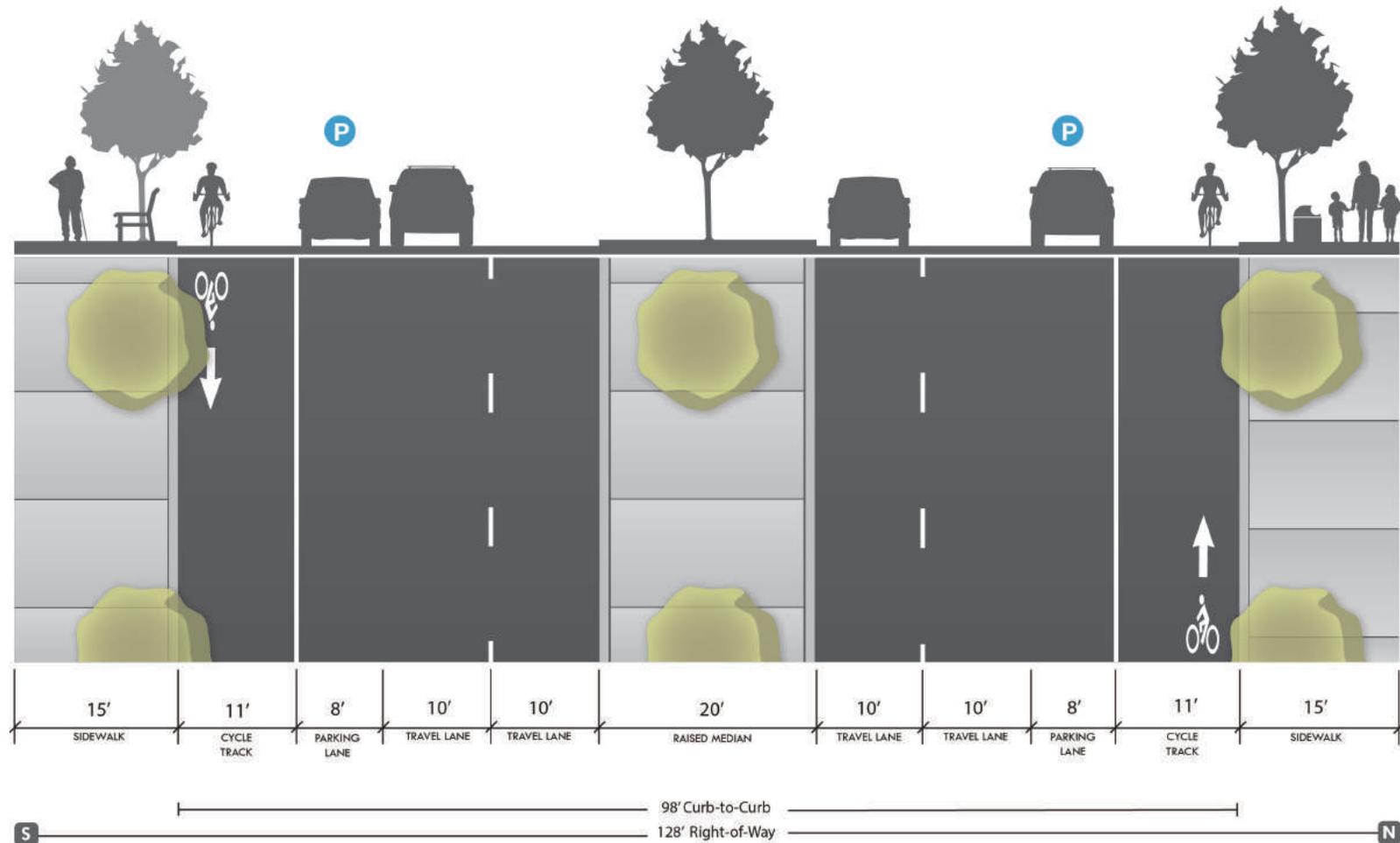
The conceptual cross-section shown above illustrates a typical section of Palmdale Boulevard at full build-out, with eight through travel lanes, central median/turn lane, bicycle lanes and sidewalks.

Figure 2.2-7: Downtown Thoroughfare



Major downtown streets serve as arteries connecting to both local and neighboring destinations, with busy multimodal activity throughout the day. Pedestrians can benefit from shorter, higher visibility, and more frequent crossing opportunities across these multiple lanes. Landscaped medians contribute to downtown aesthetics while reducing vehicle turning and parking access conflicts. Dedicated bicycle facilities provide a safer space for cyclists while calming traffic throughout the active corridor. (Source: NACTO Urban Street Design Guide)

Figure 2.2-8: Technology Drive/Avenue P-8



Additional Street Types for Commercial Areas

Five additional street types, described below and shown in Figures 2.2-9 to 2.2-13, are established for use in the downtown and primarily commercial areas of the project area.

- Downtown One-Way Street
- Downtown Two-Way Street
- Neighborhood Main Street
- Commercial Shared Street
- Commercial Alley

Together with the three commercial street types (the Transit Corridor, the Boulevard, and the Downtown Thoroughfare) designated earlier in this chapter, these additional types provide a wide palette of choices (eight types) for downtown and commercial blocks. The eight commercial street types may be applied on any of the streets designated on the Circulation Plan (Figure 2.2-3) as a Commercial Street. This level of flexibility is provided to allow for better matching of street type to land use context in the coming years, as adjacent land uses and the transit systems serving the area change and evolve. Additional details on these street types may be found in the NACTO Urban Street Design Guide.

Figure 2.2-9: Downtown One-Way Street



The roadway space of downtown one-way streets can be optimized for multimodal travel and public use by establishing slender automobile lanes and accommodating wide sidewalks, bicycle lanes, cycle tracks, transit-only lanes, and parklets. (Source: NACTO Urban Street Design Guide)

Figure 2.2-10: Downtown Two-Way Street



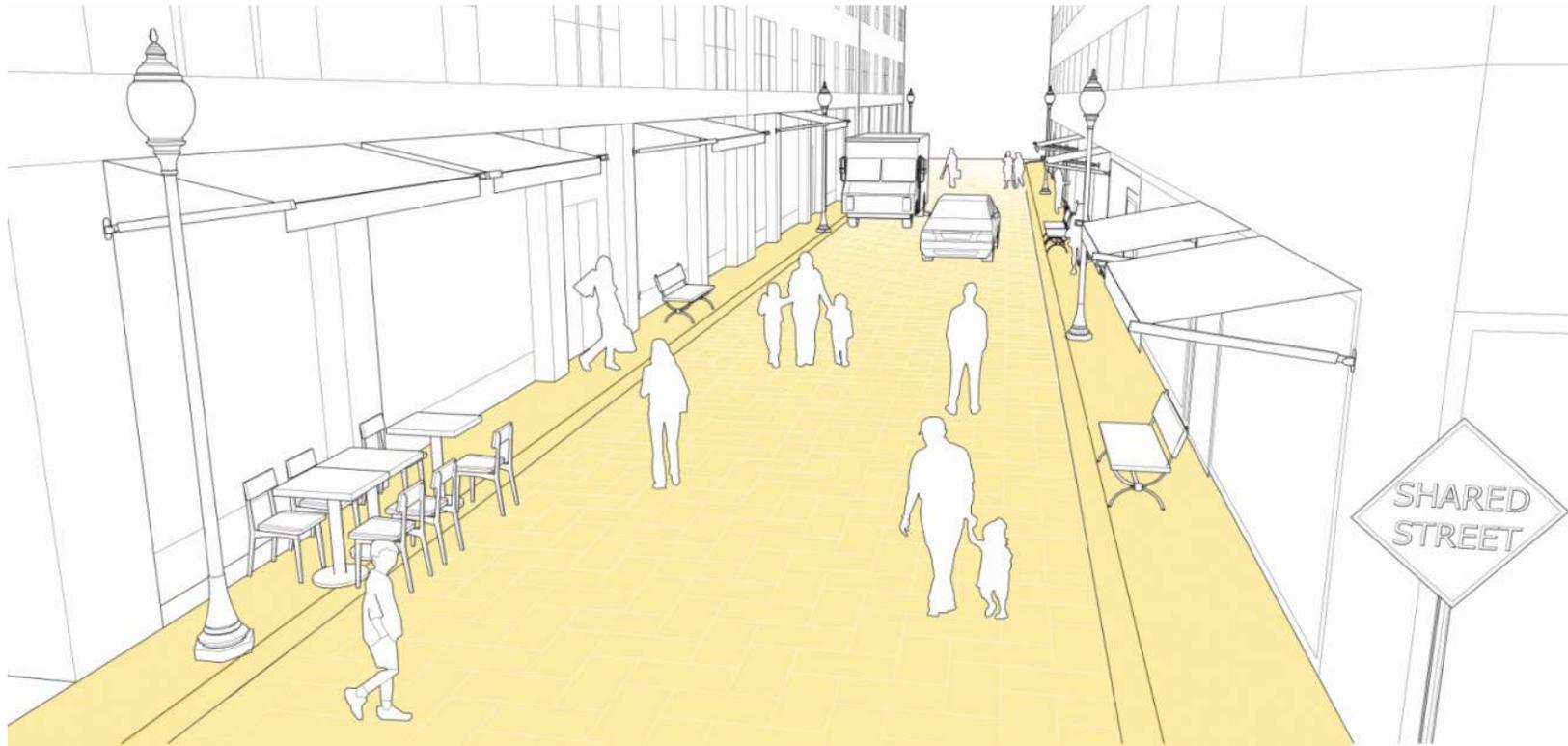
Downtown streets that operate in both directions can have the most limited design flexibility due to heavy multimodal volumes, parking needs, and constrained right-of-way. Safety and flow improvements should be the priority, in the form of high visibility pedestrian crossings, dedicated or upgraded bicycle facilities, bus bulbs. (Source: NACTO Urban Street Design Guide)

Figure 2.2-1 I: Neighborhood Main Street



Main streets are a central focus of activity in neighborhoods. Road diets (reducing 4 travel lanes to 2 with a center turning lane or median) can free road space for other uses, often with negligible impact on automobile delay. These other uses can range from new dedicated bicycle facilities to better on-street parking facilities to recreational green spaces. (Source: NACTO Urban Street Design Guide)

Figure 2.2-12: Commercial Shared Street



Commercial shared streets are ideal for urbanized, narrow commercial corridors with high pedestrian traffic and low or discouraged automobile traffic. These shared streets address many of the failures of old pedestrian malls by maintaining access for vehicles (especially freight) while intentionally slowing traffic with shared use elements. These elements include street furniture, bicycle parking, trees, and movable planters that allow street closures to traffic according to the time of day (for example, during the lunch rush in a street with many restaurants). (Source: NACTO Urban Street Design Guide)

Figure 2.2-13: Commercial Alley



Commercial alleys are frequently underutilized spaces that can instead be designed to improve freight access (thereby reducing parking demand on-street) and/or enable pedestrians and cyclists to make shorter trips between destinations. (Source: NACTO Urban Street Design Guide)

Additional Street Types for Residential Areas

Five additional street types, described below and shown in Figures 2.2-14 to 2.2-18, are established for use in areas which are primarily residential.

- Residential Boulevard
- Neighborhood Street
- Yield Street
- Residential Shared Street
- Green Alley

These additional types provide a wide range of choices for residential blocks. The five residential street types may be applied on any of the streets designated on the Circulation Plan (Figure 2.2-3) as a Residential Street. This level of flexibility is provided to allow for better matching of street type to land use context in the coming years, as adjacent land uses and the transit systems serving the area change and evolve. Additional details on these street types may be found in the NACTO Urban Street Design Guide.

Figure 2.2-14: Residential Boulevard



Boulevards in neighborhoods can lend themselves to high speed traffic despite their typically residential nature. On these streets, it is important to limit the road width available to vehicles, as wider lanes make it easier to travel at high automobile speeds. Design should also focus on activating the median as a public activity space for recreation, including linear parks, trails, and multi-use path connections to bicycle routes and community destinations. (Source: NACTO Urban Street Design Guide)

Figure 2.2-15: Neighborhood Street



Neighborhood streets feature lower traffic volumes while hosting social, recreational and playing activities for residents. These streets should therefore have elements that prioritize the safety of these activities, slowing automobiles through slender lanes, vertical deflections, and high visibility pedestrian crossings. (Source: NACTO Urban Street Design Guide)

Figure 2.2-16: Yield Street



Two-way yield streets promote slow vehicle speeds and higher driver awareness of surroundings in residential areas. Effective design means that drivers should be able to intuitively navigate the street without risking head-on collisions. These streets should be implemented in places with limited on-street parking utilization to reduce potential conflicts. (Source: NACTO Urban Street Design Guide)

Figure 2.2-17: Green Alley



Residential alleys can be upgraded to primarily support people walking, biking, playing, and socializing. Given low automobile traffic, green alleys can use modern and sustainable design elements, including pervious pavement and native plants. (Source: NACTO Urban Street Design Guide)

Figure 2.2-18: Residential Shared Street



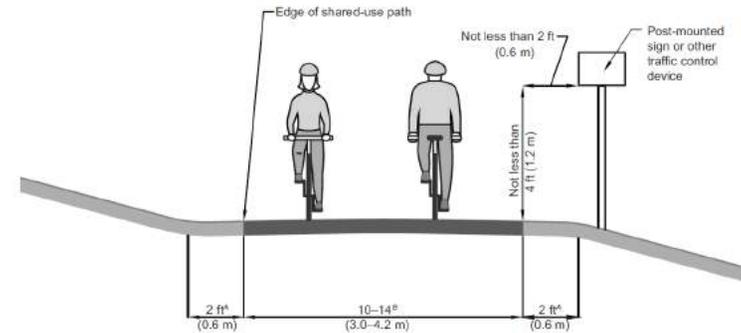
Residential streets with low automobile volumes can be designed to better support their existing functions as truly shared spaces for all users, prioritizing social and recreational activity. Residential shared streets typically enable two-way traffic, though one-way functionality is possible and should be intuitive in design. Design elements to distinguish these streets include colored pavement, flush curbs, staggered parking spaces, bollards, and street furniture. (Source: NACTO Urban Street Design Guide)

Finally, this Report establishes an additional thoroughfare type for off-street trails and paths which are reserved for bicycle and pedestrian use:

- Trail

Bicycle and pedestrian trails similar to the one illustrated in Figure 2.2-19 would be provided throughout the park and open space corridors shown on the Circulation Plan. In parks and along greenways, shared use paths can provide both commuter and recreational routes for pedestrians and cyclists. Off-street trails also provide elegant shortcuts that connect important destinations, making more trips possible for walking and biking. The image below illustrates minimum dimensions for such trails.

Figure 2.2-19: Trail



- Notes:
* (1V:6H) Maximum slope (typ.)
More if necessary to meet anticipated volumes and mix of users, per the *Shared Use Path Level of Service Calculator* (9)

Source: AASHTO Guide for the Development of Bicycle Facilities, 4th Edition 2012

2.2.3 Transit Facilities and Access

This Report establishes both Palmdale Boulevard and Avenue Q as high-capacity transit corridors. On both of these corridors, the following key features should be provided to ensure fast, frequent and reliable service:

- intersection queue jumps and/or exclusive transit lanes, where necessary to minimize traffic congestion-related delays
- transit signal priority
- level boarding
- limited stops (one-half mile to one mile between stops)
- high-quality ‘stations’ at each stop
- minimum headways of 15 minutes

Palmdale Boulevard is already proposed as a new Bus Rapid Transit line in the Antelope Valley Transit Authority’s recently completed *Comprehensive Operational Analysis & Ten-Year Plan*.¹⁵ This new line is envisioned to generally operate in mixed-flow traffic with signal prioritization, rather than in exclusive transit lanes. This Report carries forward this concept. Additionally, the Report proposes updating the AVTA plan’s proposals by adding Avenue Q as a new high-capacity transit

¹⁵ Antelope Valley Transit Authority. *Route to Success: Antelope Valley Transit Authority Comprehensive Operational Analysis & Ten-Year Plan*. Antelope Valley Transit Authority, November 2014. <http://www.avta.com/modules/showdocument.aspx?documentid=946>. Accessed January 15, 2015.

corridor to serve the new, high intensity uses envisioned for the corridor. Avenue Q would be developed in anticipation of a Bus Rapid Transit line with exclusive transit lanes running in a center median (as shown in the Thoroughfare Standards section, above). In the future, if demand warranted, rail transit could be introduced on either or both corridors to provide additional capacity.

The Avenue Q Bus Rapid Transit Line is envisioned as beginning its route in Lancaster; continuing down 10th street West past the Antelope Valley Mall; turning onto Palmdale Boulevard; stopping at Palmdale Boulevard and Trade Center Drive (adjacent to the Palmdale Regional Medical Center, an important regional destination); and then turning north on Trade Center Drive to reach Avenue Q. The BRT Line would then traverse the length of Avenue Q, with a major stop at the new Palmdale Multimodal Station.

The Palmdale Multimodal Station, described in more detail in the Palmdale TOD Overlay Zone Land Use Framework Plan, will become the region’s premier transit hub, serving as a meeting place and transfer center for high-speed rail, commuter rail, local and intercity buses, as well as providing automobile parking and rentals, carshare pods, and bicycle storage and rental facilities.

Airport Access

From the Palmdale Multimodal Station, the Avenue Q BRT line would continue east along Avenue Q to 20th Street East. The line would then turn north on 20th Street East to reach the Palmdale Airport Passenger Terminal located at the northern terminus of 20th Street East. The entire length of the BRT line between Trade Center Drive and Avenue Q on the west, and the airport

passenger terminal on the east, would be provided with exclusive transit lanes. At key locations, passing lanes would be provided within the exclusive transit lanes to allow express buses to run nonstop between key destinations such as the Palmdale Multimodal Station and the Airport. This new high-capacity transit corridor would provide fast, frequent and reliable transit service to both land uses east of the station, and the airport itself.

Providing this connection between the Multimodal Station, Palmdale Airport, and the land uses in between the two will be important, because the Southern California Association of Government's projections show that growing travel demand will generate sufficient new demand for air travel to support restarting commercial air service to Palmdale Airport. Land between the high speed rail station and the airport can then be expected to become valuable development parcels, which will require good transit service.

HIGH SPEED RAIL STATION ACCESS FROM THE AVENUE Q CORRIDOR

According to the most current available information from the California High Speed Rail Authority (CHSRA), the CHSRA has not yet determined its preferred alignment for the Palmdale to Burbank segment of the line. However, all of the alternatives currently under study by the CHSRA continue to show the California High Speed Rail line running at surface level through Palmdale, with the line running directly to the west of and parallel to the existing Metrolink/Union Pacific railroad right-of-way. The CHSRA also proposes to grade-separate all existing

railroad crossings within Palmdale, by building overpasses or underpasses. All of the alternatives propose a new Palmdale Multimodal Station for joint high-speed rail, commuter rail, and bus transit service located approximately 1250 feet south of the existing Palmdale Transportation Center. Additionally, the XpressWest Las Vegas – Palmdale high speed rail line will meet the California High-Speed Rail line at the Palmdale Multimodal Station. The proposed HSR alignment and approximate station location are illustrated on the Circulation Plan (Figure 2.2-3).

The proposed surface alignment through Palmdale will reinforce the existing barrier created by the Metrolink/Union Pacific rail tracks. To help overcome this barrier, the Circulation Plan envisions providing grade-separated railroad track crossings serving motor vehicle, bicycle and pedestrian traffic at Rancho Vista Boulevard, Avenue Q, and Palmdale Boulevard. Additionally, this Report proposes the eventual creation of three new grade-separated bicycle/pedestrian crossings, with potential new crossings at a point just north of the High Desert Corridor, at East Avenue P-12, and at East Avenue Q-6.

Finally, this Report recommends maintaining, whenever feasible, all existing public rights of way that currently cross and/or terminate at the railroad corridor and at freeway corridors. In the long term (measured in decades, rather than years), these rights-of-way may be highly useful for constructing future undercrossings or overcrossings of these major barriers to travel. The cost of maintaining these rights-of-way in public hands can be minimal. Once lost, such rights-of-way frequently can only be reestablished at significant cost, if at all, and are therefore worth preserving.

Figure 2.2-20: San Jose's Proposed California High Speed Rail and Caltrain Station



San Jose's proposed California High Speed Rail Station and the planned high-density mixed-use development surrounding it, shown in the rendering above, is already becoming a lively destination for entertainment, events, living, working and playing, as well as a hub where commuters transfer daily between commuter rail, bus, private autos and taxis. The existing San Jose Arena (now known as the SAP Center) serves as an anchor for the district's restaurants and hotels. San Jose exempts all downtown intersections from automobile Level of Service (LOS) standards, a policy which has helped the City establish and maintain pedestrian and bicycle-friendly streets in the station area. (Image courtesy of the California High-Speed Rail Authority)

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2.3 Parking & Transportation Demand Management

To avoid excessive traffic congestion from the high-intensity development envisioned for the project area, and to pay for the substantial parking supply that will be required to support the Avenue Q transit corridor and associated development, this Report proposes that parking be carefully managed, and priced at rates that cover the full cost of building, operating, and maintaining the parking supply. The Report recommends a holistic parking management strategy which integrates all aspects of parking: pricing, regulations, enforcement, and policy for both on-and off-street facilities.

2.3.1 Parking Policies

To achieve these goals, this Report proposes the following parking policies. All of these are commonly used in urban areas and transit-oriented districts, and at major regional transit hubs. A common thread in these parking principles is the idea of ensuring that parking is treated more as an ordinary commodity, where spaces are bought and sold, or rented and leased, and where parking is paid for by the driver who uses it.

As described previously in Section 2.1.3, Summary of Recommendations and Phasing, many of the parking and transportation demand management policies in this chapter will

likely require implementation only in the medium (5 – 10 years) or long-term (10 or more years from today, once high-speed rail trains have begun serving Palmdale Station). The California High-Speed Rail Authority intends to charge for parking at the station, at rates that cover the full cost of the parking facilities. To pay for the full cost of the parking – ultimately, structured parking – that will serve thousands of rail passengers, daily parking fees of \$8 to \$12 or more can be expected to be needed. If there is no parking pricing or residential parking permit districts on City streets around the station, these streets can be expected to overflow with hundreds of all-day commuters' cars, and once all of that unmanaged curb parking fills, some commuters can be expected to park on the street near local transit stops (e.g., along the future Avenue Q transit corridor), and then take a short ride to avoid the station area's parking fees.

Additionally, properties in the Avenue Q area will, most likely, have begun to redevelop with the high-density mixed-use buildings envisioned in the Land Use Plan. Experience from many similar urban districts has shown that if curb parking in high-density districts is left unmanaged, it tends to fill up (even when nearby, but slightly less convenient and less visible off-street parking is available).

To address these changes, in the medium-term, actively managing curb parking in the vicinity of the station (i.e., within a 10 minute walk), as well as in areas of high-density mixed-use development, may become necessary. In the long-term, it will be essential. Managing curb parking will require a mix of parking pricing and residential permit parking, in order to ensure that on-street parking is well used, but readily available. These parking policy recommendations, along with others useful for helping the plan area thrive and succeed in over the long-term,

are described below. This Report’s recommended parking policies are as follows:

TR-G-2 Manage, price, and set zoning code requirements for parking to achieve the following goals: maximizing transit, cycling and walking trips; minimizing motor vehicle trips; increasing social equity and housing affordability (by charging separately for parking, rather than hiding its cost in the cost of other goods and services); and minimizing paved surfaces, with their associated environmental costs (e.g., heat island effects, air and water pollution, and storm water runoff).

Policies for Managing On-Street Parking

TR-I-12 Priorities for use of curb space. Adopt a clear hierarchy for the use of scarce curb space, prioritizing (in order from highest to lowest priority):

- i. public safety measures, such as pedestrian safety measures and fire hydrant access;
- ii. pedestrian movement;
- iii. public transit;
- iv. bicycle facilities;
- v. active freight and passenger loading, including taxi stands;
- vi. short-term parking for people with disabilities;
- vii. short-term parking for all others;
- viii. long-term parking for shared vehicles, such as car share vehicles;

- ix. long-term parking for people with disabilities;
- x. long-term parking for existing residents;
- xi. long-term parking for all others.

TR-I-13 Curb parking occupancy goal. Adopt a goal of setting parking prices to ensure that curb parking is well used, but readily available. Set prices at the lowest rate required to ensure that at least one or two spaces per block are available most of the time (approximately an 85% occupancy rate).

TR-I-14 Parking pricing when warranted by demand. On each block, charge for parking whenever necessary – including evenings and weekends, if needed – to achieve the City’s occupancy goal (approximately 85% maximum occupancy per block).

TR-I-15 Performance-based parking pricing. Implement performance-based parking pricing with rates that vary by time of day, day of week and by block.

TR-I-16 Pricing rather than time limits. Use prices rather than time limits to achieve curb parking availability.

TR-I-17 Curb parking privileges for existing residents. Accommodate existing residents by providing them with parking permits allowing them to continue to park at the curb for free (or a nominal price) in their neighborhood. Charge non-residents and future residents for parking at rates that achieve the City’s occupancy goals.

TR-I-18 Use of curb parking revenues. Dedicate all curb parking revenues to improve public facilities and services in the blocks where the parking revenue is

- generated, in order to sustain local support for parking pricing.
- TR-I-19 **Establish commercial and residential parking benefit districts.** Establish multiple parking benefit districts for the commercial and residential areas of the Study Area, in order to provide an institutional structure for returning curb parking revenue to the blocks where it was collected to fund neighborhood improvements.
- TR-I-20 **Revenue return to parking benefit districts.** Return curb parking revenues to the parking benefit district where the revenue is collected, to fund improved public infrastructure and services.
- TR-I-21 **Advisory role for local organizations.** Give existing merchant and neighborhood organizations, such as Business Improvement Districts, a significant advisory role in deciding how to spend their local parking benefit district's revenues.
- TR-I-22 **Technology deployment for managing curb and off-street parking.** Improve parking monitoring and enforcement with integrated "smart" meters that accept credit cards and coins, pay-by-phone technologies, off-street Parking Access and Revenue Control Systems, and license plate recognition (LPR) systems.
- TR-I-23 **Parking occupancy sensors.** Evaluate emerging parking occupancy sensor technologies (in-ground and/or on-meter) and consider deploying them if and when current reliability, accuracy and cost problems are overcome.

In recent years, numerous California municipalities, including Los Angeles, Oakland, Redwood City, San Francisco, Ventura, Walnut Creek, and others around the nation have adopted on-street parking management policies similar to those set forth above.

Additional information on these city's policies, and their experiences in implementing them, is available in handbooks such as San Francisco's "SFpark: Putting Theory Into Practice"¹⁶, and on the websites of Los Angeles' LA Express Park performance-based parking pricing program¹⁷, and Ventura's downtown parking management program¹⁸. Additional information on the benefits of and theoretical foundation for these policies may be found in UCLA Professor Donald Shoup's *The High Cost of Free Parking*.¹⁹

Benefits cited by cities which have adopted performance-based parking pricing policies similar to those above include:

- Making it easier to park through improved parking availability, easier ways to pay, and enhanced information and wayfinding.

¹⁶ *SFpark: Putting Theory Into Practice*. San Francisco Municipal Transportation Agency, June 2014. Accessed June 20, 2016. http://sfpark.org/wp-content/uploads/2014/06/SFpark_Pilot_Overview.pdf.

¹⁷ "LA Express Park | Save Time, Park Smarter." Accessed June 20, 2016. <http://www.laexpresspark.org/>. Accessed June 20, 2016.

¹⁸ "Parking | City Of Ventura." Accessed June 20, 2016. <http://www.cityofventura.net/pw/transportation/parking>.

¹⁹ Shoup, Donald C. *The High Cost of Free Parking*. American Planning Association (Planners Press), 2005.

- Decreasing congestion and pollution, and speeding up public transit, by decreasing the number of drivers circling and double-parking.
- Making streets safer for motorists, bicyclists and pedestrians by decreasing the number of drivers circling and double-parking.
- Improving economic vitality and quality of neighborhoods by making it easier to enjoy their city’s commercial areas, through improved parking availability, cleaner air, less congested streets, and safer conditions for motorists, pedestrians and bicyclists.
- Making it possible to remove and/or reduce minimum parking requirements for new development without experiencing spillover parking problems on nearby streets. In turn, removing or reducing minimum parking requirements has made it financially feasible to build desired types of compact, mixed-use infill development, bringing new economic development and revitalization, more affordable housing, and increased property values to aging neighborhoods.

The effects of San Francisco’s performance-based parking pricing programs have been particularly well-documented, with its benefits summarized in the FHWA-funded SFpark Pilot Project Evaluation Summary report.²⁰

²⁰ *SFpark Pilot Project Evaluation Summary*. San Francisco Municipal Transportation Agency, June 2014. Accessed June 20, 2016. http://sfpark.org/wp-content/uploads/2014/06/SFpark_Eval_Summary_2014.pdf.

Implementation of these kinds of parking policies has also been eased by the falling costs, improved performance and widespread availability of technologies such as wirelessly-networked and credit-card accepting “smart” meters, license plate recognition systems and pay-by-phone technology. Wirelessly-networked meters, for example, have made it relatively easy to track parking revenues, estimate parking occupancy, and remotely adjust parking prices on a block-by-block basis. Many cities now do so on a regular (e.g., annual, quarterly or monthly) basis.

Similarly, pay-by-phone systems, which typically use a vehicle’s license plate as its “virtual parking permit”, have made it possible for cities to implement curb parking pricing without installing physical parking meters or any other new physical infrastructure, other than regulatory and informational signage. Enforcement and monitoring of parking occupancy and parking payment has also been eased by the widespread adoption of license plate recognition systems.

Policies for Managing Publicly-Owned Off-street Parking

TR-I-24 **Public parking district.** Establish a public parking district to create public parking facilities, and thereby ensure the efficient sharing of parking between land uses with different times of peak parking demand. Designate the entire study area as a parking district (in legal terms), in order to allow the flexibility to establish public parking facilities anywhere they become needed. Finalize precise locations for public parking over time, as development proceeds, in order to provide parking when and where it is needed, in a process that is closely coordinated with land-use development.

- TR-I-25 **Off-street Parking Enterprise Operation.** Refrain from subsidizing automobile storage and use: require that City-owned lots and garages in downtown be operated as an enterprise operation, which pays for itself through user fees. As necessary, establish programs to allow retailers to reimburse the Enterprise Operation for valet parking for customers.
- TR-I-26 **Off-street Parking Enterprise Operation Funding.** Require that the Off-Street Parking Enterprise Operation support itself solely through lot and garage user fees, without additional support from other taxpayer dollars or curb parking revenues. Plan and budget for the long-term financial sustainability of this Enterprise Operation, including setting parking rates which are sufficient to provide for long-term facility maintenance, renovation, reconstruction, and staffing.
- TR-I-27 **Parking wayfinding.** Develop an integrated wayfinding system for parking facilities, including both static and dynamic (changeable electronic display) signage to provide guidance and real-time parking availability information.

Since at least the 1920s, downtowns, rail station areas, and neighborhood business districts in cities throughout California have established public parking districts in order to allow businesses and other land uses to efficiently share parking. Laws such as California's Parking District Laws of 1943 and 1951 were established to ease this process.

Establishing efficiently shared parking, which is available to the general public, is important for the financial viability of downtowns and walkable districts. Ensuring this kind of "Park

Once" environment is fundamental to the creation of thriving, compact mixed-use districts. The typical suburban pattern of isolated, single-use buildings, each surrounded by parking lots, requires two vehicular movements and a parking space to be dedicated for each visit to a shop, office, or civic institution. To accomplish three errands in this type of environment requires six movements in three parking spaces for three tasks. With virtually all parking held in private hands, spaces are not efficiently shared between uses, and each building's private lots are therefore typically sized to meet a worst-case parking load. If a proposed transit-oriented district attempts to provide typical suburban quantities of parking, with little or no sharing, the result will be a system that is costly and inefficient, and a land use pattern that is anything but transit-oriented. Applying conventional suburban parking ratios will generate freestanding office and retail boxes surrounded by cars, or pedestrian-hostile buildings that hover above parking lots; and the resulting low density fabric generates too few pedestrians to let the place reach critical mass.

When the suburban practice of building individual private lots for each building is introduced into a mixed-use district, the result is also a lack of welcome for customers: at each parking lot, the visitor is informed that his vehicle will be towed if he or she peruses any place besides the adjacent building. When this occurs, nearby shopping malls gain a distinct advantage over the district with fragmented parking. Mall owners understand that they should not divide their mall's parking supply into small fiefdoms: they operate their parking supply as a single pool for all of the shops and other uses, so that customers are welcomed wherever they park.

The compactness and mixed-use nature of the proposed district's mixed-use areas lend themselves to a "Park Once" strategy.

Operating most of the parking supply in the mixed-use areas as one or more shared pools will result in significant savings in daily vehicle trips and required parking spaces, for three reasons:

- Park Once: those arriving by car can easily follow a “Park Once” pattern: drivers can park their cars just once and complete multiple daily tasks on foot before returning.
- Shared parking among uses with differing peak times: spaces can be efficiently shared between uses with differing peak hours, peak days, and peak seasons of parking demand (such as office, restaurant, retail and entertainment uses).
- Shared parking to spread peak loads: the parking supply can be sized to meet average parking loads (instead of the worst-case parking ratios needed for isolated suburban buildings), since the common supply allows shops and offices with above-average demand to be balanced by shops and offices that have below-average demand or are temporarily vacant. It is important to realize that even within a single land use category (e.g., offices), parking demand per square foot of built space can vary by a factor of 10 or more.

When parking is efficiently shared, all of these factors result in less need for costly parking lots and garages, resulting in lower capital and operations costs, better urban design and greater development opportunities. Finally, and perhaps most importantly, by transforming motorists into pedestrians, who walk instead of drive to different district destinations, a “Park Once” strategy is an immediate generator of pedestrian life, creating crowds of people who animate public life on the street and generate the patrons of street-friendly retail businesses.

To implement a “Park Once” strategy, most parking in the district should be managed as a shared utility, just like streets and sewers, with available-to-the-public parking provided in strategically placed lots and garages. Completing the work of establishing a public parking district is beyond the scope of this study. This task can and should be completed over the medium (5 – 10 years) or long-term (10+ years), as development proceeds, in order to allow shared parking facilities to be developed and funded in close coordination with the private sector, civic and rail station developments that will make use of them.

Policies for Regulating Privately-Owned Parking

To manage future growth in ways that minimize traffic congestion and pollution, while improving economic vitality and social equity, establish the following policies for regulating privately-owned parking:

- TR-I-28 **Removal of minimum parking regulations.** Amend the Zoning Ordinance to remove all minimum parking regulations in the Study Area, in order to allow the emergence of a more normal market for parking, where spaces are bought and sold, rented and leased, much like any other commodity.
- TR-I-29 **Establish maximum parking requirements.** Amend the Zoning Ordinance to establish maximum parking requirements for all land uses in the Study Area.
- TR-I-30 **Unbundling of parking costs, carshare parking and provision of transit passes.** Require new developments to: (a) unbundle the cost of parking from the cost of other goods and services; (b) offer carsharing agencies the right of first refusal for a

limited number of parking spaces and require that those spaces be provided to the carsharing agencies free of charge; and (c) provide free deep-discount group transit passes for local bus service to the project’s residents and/or employees.

In order for the City to realize its goals for the development of the plan area as a walkable, transit-oriented district, particularly over the long-term, it will be helpful for the plan’s zoning to fully support those goals. The experience from similar mixed-use districts throughout California and the United States indicates that existing citywide minimum parking requirements pose a substantial obstacle to the physical and financial feasibility of developing the types of compact, high-density and mixed-use development envisioned for the area.

In particular, walkable and transit-oriented districts which follow the strategy of developing shared public parking facilities generally remove minimum parking requirements, since requiring new developments to build parking on-site discourages the use of the shared public lots.

The table to the right lists some of the many places, such as the entire nation of Great Britain, that have removed minimum parking requirements from various neighborhoods.

Communities That Have Eliminated Minimum Parking Requirements

Examples of communities that have partially (in particular neighborhoods and districts) or entirely eliminated minimum parking requirements include:

Austin, TX	Muskegon, MI
Boulder, CO	Nashville, TN
Coral Gables, FL	Oakland, CA
Eugene, OR	Olympia, WA
Fort Collins, CO	Portland, OR
Fort Myers, FL	Sacramento, CA
Fort Pierce, FL	San Francisco, CA
Greenfield, MA	Sandpoint, ID
Great Britain (entire nation)	Seattle, WA
Hayward, CA	Spokane, WA
Los Angeles, CA	St. Paul, MN
Miami, FL	Stuart, FL
Milwaukee, WI	Whittier, CA

Minimum parking requirements, even relatively low ones, also frequently deter investment and reinvestment in mature transit-oriented districts, particularly by developers who serve the niche markets of tenants (both residential and commercial) who rely heavily on transit, bicycling and walking, and have little or no need for on-site parking. In the long-term, therefore, as this area develops, redevelops and intensifies in use, current code requirements are likely to work against the City’s overall goals for this station area. By their very nature, minimum parking requirements are designed to ensure that districts have more parking than would exist if the matter was left up to the market,

and over the long-term, they therefore distort transportation choices toward automobile travel, while increasing housing costs and the cost of other goods and services.

The one useful purpose that minimum parking requirements do serve is to prevent spillover parking issues – provided that they are strict enough, and provided that no fees are charged at off-street lots. However, if the other strategies suggested in this report are adopted, pricing of curb parking, combined with residential parking permits, will ensure that ample vacancies exist on the street. Where good curb parking management has been implemented, minimum parking requirements become superfluous, and only their unfortunate side effects remain.

Note that when a city (a) manages curb parking properly, to prevent spillover parking, and (b) removes minimum parking requirements, the result is that market forces determine how many parking spaces new developments need to provide. In the modern world, real estate developers generally cannot obtain financing to construct a new development unless they can satisfy lenders that they have a plan for providing adequate parking; and cannot attract buyers or tenants unless they can assure them that the development has access to adequate parking. As a result, when curb parking is properly managed to prevent spillover parking, developers must either provide private on-site parking, or else make it possible to rent or lease parking spaces from an area's public parking supply.

Numerous California precedents demonstrate that removing minimum parking requirements, combined with active curb parking management, can help redeveloping neighborhoods attract new investment and flourish. For example, San Francisco's Mission Bay Plan, a plan to redevelop the City's rail

yards and surrounding areas as a transit-oriented district, removed all minimum parking requirements from the area in 1998. Today, the neighborhood is home to the new San Francisco Giants ballpark, a new UC San Francisco campus, biotech and high technology offices, hundreds of new condominiums, and parking (at levels primarily determined by market demand) to serve these uses. Mission Bay's success helped spur city leaders to remove minimum parking requirements from numerous other established San Francisco neighborhoods.

Similarly, in the East Bay suburb of Hayward, California, the South Hayward BART/Mission Boulevard Corridor Specific Plan eliminated minimum parking requirements and replaced them with maximum parking requirements. These new standards generally allowed the developers of infill projects in this zone to provide the amount of parking which they found appropriate to meet the demands of their particular target market. (The relatively loose maximum parking requirements, however were designed to discourage highly auto-oriented businesses to locate elsewhere in the city, rather than in what is intended to become a compact, walkable neighborhood.) For example, the Wittek/Montana mixed-use development, which is transforming former rail station parking lots into a \$120 million housing and retail development, proposed to build approximately 898 parking spaces for 788 market-rate and affordable multi-family residential units, although no parking spaces at all are required by current zoning.

Additional Transportation Demand Management Policies

To improve transportation choices, while minimizing congestion and pollution:

- TR-I-31 **Cost-effective transportation demand management (TDM).** Assess the most cost-effective mix of investments in pedestrian, bicycle, transit, ridesharing and parking infrastructure and services for meeting Palmdale's economic, environmental and social equity goals.
- TR-I-32 **Development of TDM programs.** Develop transportation demand management programs with clear, quantifiable goals for reducing parking capital and operating costs, vehicle trips and pollution.
- TR-I-33 **Planning, funding and staffing TDM programs.** Plan, fund and staff TDM programs with the same clarity of purpose, level of expertise and seriousness normally accorded to a major parking garage construction project.
- TR-I-34 **Funding TDM programs with parking revenue.** Use a portion of parking revenues to fund TDM programs, focusing particularly on helping commuters leave their cars at home, in order to free up more space in future City-owned garages for high-priority, high-revenue hourly customer parking.
- TR-I-35 **Deep-discount group transit pass programs.** Establish deep-discount group transit pass programs to provide free local bus transit access for existing and future residents and employees. Consider using a

portion of curb parking revenues to fund these passes.

- TR-I-36 **Enforcement of parking cash-out law.** Encourage and enforce compliance with California's parking cash-out law.
- TR-I-37 **Transportation Management Association.** Establish a Transportation Management Association for the Study Area, to improve traveler information about, marketing of, and employer participation in programs and services regarding walking, bicycling, ridesharing and transit.

Fully implementing these parking and transportation demand management policies can help Palmdale make real progress towards its economic, environmental, and social equity goals. Performance-based parking pricing has been shown to be one of the single most effective ways to improve parking availability for customers, reduce double parking and circling in search of underpriced curb parking, and to thereby reduce unnecessary frustration, vehicle miles traveled, wasted gasoline, and pollution. Better parking management – in particular, ending below-market rate parking pricing, and the judicious use of a portion of parking revenues to fund better transportation choices – can also significantly increase walking, bicycling and transit trips, which translates directly to reductions in vehicle use and the improved vitality and livability of commercial districts and adjacent neighborhoods.

Managing parking with social equity goals in mind can also reduce inequality. On average, low-income families own fewer cars and drive less than the average family. They rely more heavily on walking, bicycling and transit. Wealthy families own

more cars, drive more, and park more often. Parking management policies that remove public subsidies for automobile parking can therefore increase social equity. For example, removing minimum parking requirements increases housing affordability. Similarly, using a share of curbside parking revenues to fund free transit passes can help low income families, who often cannot afford an automobile, meet their daily needs. Finally, but not least, effective parking management makes convenient parking readily available on every block, resulting in positive economic impacts for local businesses, as employees, residents, and visitors can all better utilize the parking supply to shop, dine, or recreate.

Part 3: Urban Design, Street, and Streetscape Recommendations Report

3.1 Introduction

3.1.1 Purpose of this Report

This report presents recommendations for the feasibility of developing Avenue Q as a successful transit-oriented development, mixed use corridor, and presents standards and design guidelines for streetscape and open space development. Streets form the underlying network for connectivity in the Avenue Q Study Area (Figure 3.1-1), and this community can be given form and charm through streetscape design.

This report is a companion document to the Avenue Q Land Use Framework Plan, which serves as the land use regulatory document to guide development in the Study Area, and the Avenue Q Transportation Report, which provides a connectivity framework.

REPORT OBJECTIVES

Objectives support the Land Use Framework Plan and accomplish the following:

- Create transit-oriented development with beautiful streetscapes and public spaces.
- Create a new neighborhood community-serving park that serves as a both a buffer and transition space to separate AND connect living areas with public entertainment and commercial areas, and a school site.
- Increase development within walking and biking distance of transit, jobs and shopping to support affordable, healthy, and sustainable lifestyles.

- Encourage the use of local hardscape and softscape materials.
- Design with a family of related elements for continuity and community identity.
- Incorporate sustainable strategies.
- Encourage Palmdale to develop a clear and easy design approval process.

3.1.2 Guiding Policies and their Relationship to other Plans & Implementation

Refer to the Avenue Q Land Use Framework Plan for background for this report. Thoroughfare policies, networks and types and transit facilities and access as presented in the Transportation Report form the framework for the landscape hard- and softscape improvements identified in this report.

3.1.3 Summary of Recommendations & Phasing

The following policies guide Urban Design, Streetscape and Open Space (UDSOS) development:

- **UDSOS-G-1** Connect Existing Assets and Destinations; Use Unified Design Standards

The Avenue Q Study Area is divided by State Route 14. The Land Use Framework Plan neutralizes this physical barrier, and a family of streetscape design elements can

strengthen connections. Connectivity can also be expressed through the design of a network of parks and greenbelts or open space corridors. An Open Space strategy improves the park network using pedestrian and street connections to bring amenities to all residents within a reasonable walking and biking distance. Connectivity also includes the relationship between the Avenue Q Study Area and the Palmdale TOD Study Area.

- **UDSOS-G-2 Create Zones: Live/Buffer/Play/Buffer**
Create zones for living and entertainment buffered (separated and connected) by beautiful public parks and public spaces.
- **UDSOS-G-3 Create Great Streets**
Comfortable, tree-shaded, pedestrian-friendly streets are enjoyable for people to live along, can contribute to neighborly interaction, and lead to higher levels of walking and bicycling. They are safe and easy to navigate. As connectors they can provide a unifying structure for neighborhoods and weave communities together into one integrated fabric.
- **UDSOS-G-4 Create Great Spaces**
Successful public spaces are accessible, people engage in activities there, the space is comfortable and visually attractive, and it is a place where people socialize. They are welcoming and friendly. Great spaces have shade, they are destinations, and they are oriented to adjacent land use and support the context around them. They are kept clean and safe 24 hours a day and 365 days a year. Great Spaces include the transit village (condominiums,

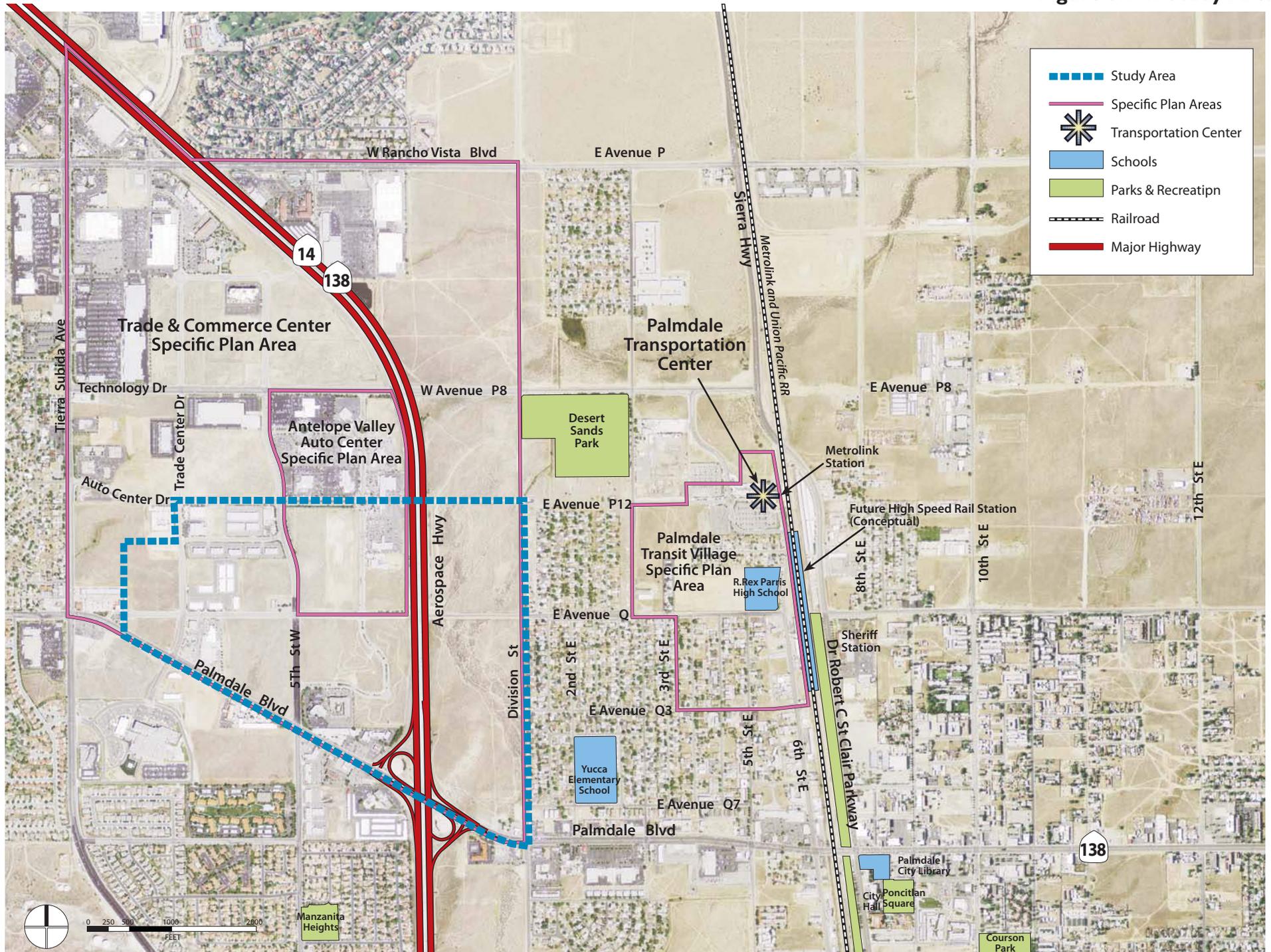
courtyard apartments, townhouses, etc.), buffer zones and the entertainment zone.

- **UDSOS-G-5 Design with Local Materials**
Materials - hardscape and plant material - used for streetscape and placemaking should reflect the character and ecology of the area and celebrate Palmdale's past, present and future. All plant material to be climate/environmentally appropriate.
- **UDSOS-G-6 Design with a Family of Elements**
- Develop a family of design elements that establishes unity and continuity within the Study Area and that can adjust or respond to the immediate context but that also retains its essence. These forms, shapes, patterns, colors, and textures form the design basis for site identity and image and can be part of what defines open space in Palmdale.
- **UDSOS-G-7 Incorporate Sustainable Strategies**
Live with the land, not against it. Incorporate Best Management Practices and methods and strategies to collect and distribute stormwater, acknowledging that we must work as stewards of our natural resources if we want to live well today and plan for future generations.

See Chapter 3.3 below for more detailed descriptions.

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Figure 3.1-1: Study Area



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Ecologically-appropriate public space.

PHASING

All UDSOS-G policies are dependent upon the implementation of the Land Use Framework Plan and Transportation Report recommendations and would be coordinated with development within the Land Use Plan framework. The Land Use Framework Plan and this report should also be thought of as living documents, which will need to be regularly updated and refined. Over the coming years, long-range planning efforts will continue. Plans and schedule for implementation of the California High-Speed Rail, the XpressWest High-Speed Rail, and other major infrastructure can be expected to change and evolve: the Land Use Framework Plan and this report will then likely need to be amended so that it reflects the most current status. All development in the Avenue Q Study Area is to be coordinated with development in the Palmdale TOD Study Area.



Fun connectors for public spaces.



Connector sidewalks and public spaces with appropriate plantings.

3.2 Existing Conditions Analysis

3.2.1 Parks and Open Space

SCHOOLS, PARKS AND RECREATIONAL FACILITY AMENITIES

Currently, the Study Area has no schools, parks or recreational amenities. Two areas have landscaped medians with trees. There are no trees in parkways in other areas of the Study Area.

3.2.2 Connectivity

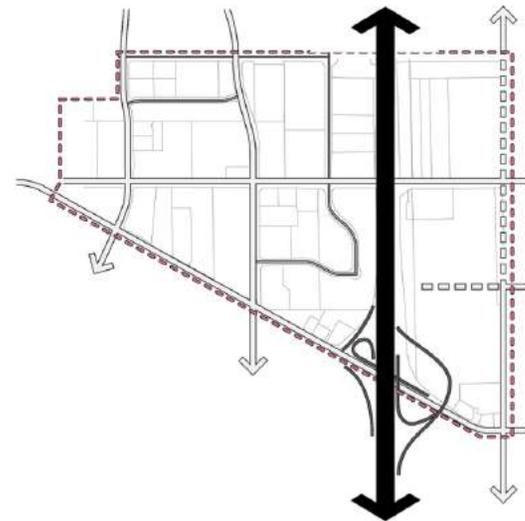
Perimeter streets include Division Street (separating residential from vast open spaces), Palmdale Boulevard (commercial), and Technology Drive (open and commercial). California State Route 14 slices through the Study Area, creating a divider in the community that physically and perceptually disconnects and isolates portions of the city with one exit at Palmdale Boulevard and underpasses at Avenue Q and Technology Drive.

There are few **internal local streets**; the site is characterized by wide open spaces with intermittent primarily commercial development. Streets have sidewalks, power poles and cobra lights, and there are a few areas with no infrastructure.

In the Avenue Q Study Area, there is a need to create a roadway network with a variety of street types that adhere to design

standards including curbs, gutters, parkways, sidewalks, landscape, lighting, and signage.

Figure 3.2-1: Slices – California State Route 14 Divides the Study Area

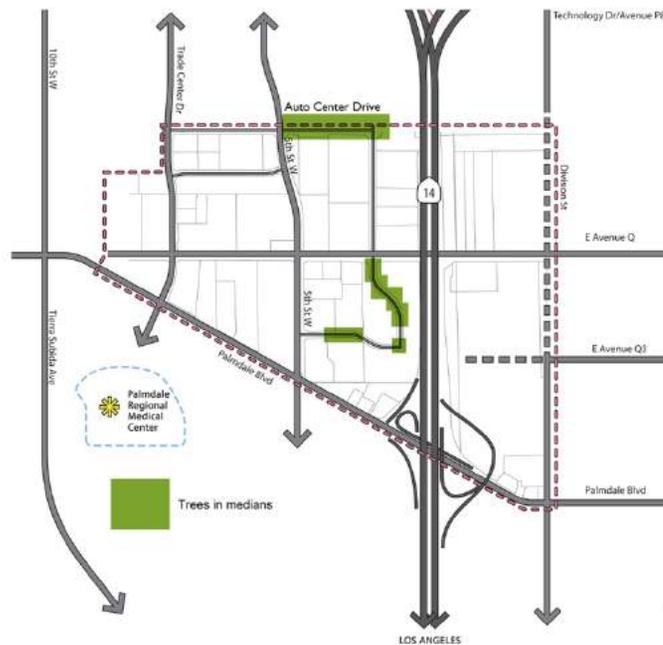


3.2.3 Landscape

Existing edges along California State Route 14 are open ground with natural landscape, unplanted, with no buffer from the freeway. Commercial development related to sales and service of vehicles as well as the commercial corridor along Palmdale Blvd. have brought medians and streetscape enhancements that are healthy and maintained. In other areas there are no medians, street trees or elements that provide shade or mediate or acknowledge the environment that have been installed and are maintained by the City in the public right of way.

Figure 3.2-2 shows that landscaped medians and street trees are limited in number in the Study Area.

Figure 3.2-2: Existing Street Trees and Trees in Medians



Palmdale's plant palette has plants that are not suited to Palmdale's environmental conditions, that have high water needs or require shade, maintenance and extra care, an investment on the part of the City. Without attention, plant material that is not native or native adaptive has a difficult time thriving for these reasons. The median at the Auto Center is an investment in plant material – turf, for example - that is not appropriate to the area. A different design choice, one that selects landscaping and

hardscape materials from the local area, can look beautiful and require much less intervention and resources.



Median planting at the Auto Center



State Route 14 cuts through the Study Area, effectively dividing it into two pieces.

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Division Street: Existing conditions. No sidewalks, no curbs, no trees.



5th St. W at Auto Center Drive: Trees are on private property, not public land. These are not street trees, or parkway trees.



5th St. W at Auto Center Drive. Trees on private land. No street trees.



Median planting at Carriage Way



Commerce Avenue: Sidewalks, curbs and trees on the commercial property. Commercial, not City development.



Desertscaes with climate-appropriate hard- and softscape.

3.3 Urban Design, Streetscape & Open Space Recommendations

3.3.1 The Vision: Guiding Policies

Unified urban design – placemaking – uses structure and landscape to define and energize pedestrian-oriented spaces such as streets and sidewalks, parks, plazas and squares, as well as the connections that link them. In this way, we build a pattern of organized, interconnected places that may be very diverse but that together create a variety of places that accommodate a range of urban activities. Under the standards and recommendations in this report, the Study Area would be transformed with a clear orientation to a new multimodal Palmdale Station, located along the Avenue Q corridor just outside the Study Area. The vision for streetscape design is based on the following seven guiding principles:

- **UDSOS-G-1** Connect Existing Assets and Destinations; Use Unified Design Guidelines
- **UDSOS-G-2** Create Zones: Live/Buffer/Play/Buffer
- **UDSOS-G-3** Create Great Streets
- **UDSOS-G-4** Create Great Spaces
- **UDSOS-G-5** Design with Local Materials
- **UDSOS-G-6** Design with a Family of Elements
- **UDSOS-G-7** Incorporate Sustainable Strategies

UDSOS-G-1 Connect Existing Assets and Destinations; Use Unified Design Guidelines

SR 14 slices through the Study Area, creating a divider in the community that physically and perceptually disconnects and isolates portions of the city. The Land Use Framework Plan neutralizes this physical barrier, and a family of streetscape design elements can strengthen connections. Improved connectivity within the Study Area and to the surrounding neighborhoods will enhance the area’s accessibility and role as a citywide destination and are most effective if they support a larger vision for the shape and character of the district. Refer to the Transportation Report and the Land Use Framework Plan for the proposed street layout of the Study Area.

Connectivity can also be expressed through the design of a network of parks and greenbelts or open space corridors. The development of an open space corridor along Avenue Q would encourage activities and community life in live/work/play spaces. Open space corridors can also be developed as walking routes with activity nodes and as a delight that enriches the image of and life in the community.

An Open Space System includes the creation of a park – the only park in the Avenue Q Study Area apart from a recreational area around a proposed school site - and bringing amenities to all residents within a reasonable walking and biking distance. New development should require a strong relationship with the new park, plazas and streets. The focus should be on maximizing visibility and safety and open space development, and providing varied types of spaces that meet a wide range of needs for the community.

All networks should be designed with unified design standards for sidewalks, parkways, curbs, appropriate trees and amenities.



Connectivity: One Buffer Zone, a creative and safe underpass that connects both sides of the Study Area

UDSOS-G-2 Create Zones: Live/Buffer/Play/Buffer

Activate the Avenue Q Study Area and connect it with the Palmdale TOD Study Area through the development of a Live-Play-Live corridor with connecting buffer zones.

Figure 3.3-I: Avenue Q Zones



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'LIVE' Zone: Multi-family residences, activated streets.



'PLAY' Zone



'PLAY' Zone



'BUFFER' Zone: Spaces that both separate and connect LIVE areas from PLAY areas.



'BUFFER' Zone: An urban park that both separates and connects LIVE spaces with ENTERTAINMENT/COMMERCIAL spaces.

UDSOS-G-3 Create Great Streets

Living rooms are commonly defined as places for general and informal everyday use, for common social activities of the occupants. In a larger, more abstract sense, well-designed streets can serve this function in a community. Climate-appropriate, tree-shaded, pedestrian-friendly streets are enjoyable for people to live along, can contribute to neighborly interaction, and lead to higher levels of walking and bicycling. They are safe and easy

to navigate. As connectors they can weave communities together into one integrated fabric.

Streets with comfortable sidewalks and planted parkways and medians can provide a unifying structure for neighborhoods. Street trees provide shade canopy, define the street public ROW edges, can introduce seasonal change and color, and contribute to wayfinding. Enhanced street crossings for both bicyclists and pedestrians along with dedicated bike lanes where feasible should be of the highest priority. Shade trees that are climate appropriate will improve the pedestrian experience, increase property values and reduce heat island effects.

Great streets are Complete Streets, safe and attractive for all modes of movement with strong links to local destinations as well as adjacent districts. They are essential for enhancing livability and encouraging investment for and the success of a transit-oriented plan for Palmdale.



A double allee of desert trees along sidewalks offers relief from the sun and makes walking enjoyable.

Streetscape improvements define corridors linking destinations within and adjacent to the Study Area. The expansion of the existing adjacent grids of small-grain residential blocks through the creation of a network of local connector streets improves

connections among existing and proposed assets and destinations. This circulation system accommodates the full range of vehicular access – cars, busses, taxis – but also promotes all modes of movement, including walking, bicycling, and those of the impaired, particularly connecting non-vehicular modes of travel to the station (located just east of the Study Area).

UDSOS-G-4 Create Great Spaces

Successful public spaces typically have four key qualities: they are accessible, people engage in activities there, the space is comfortable and visually attractive, and it is a place where people socialize.



Connect buildings with streetscape and sidewalks through interesting articulation and plazas.

Great public spaces, including existing or proposed parks, community gathering spaces and recreation facilities, are

welcoming and friendly. Everyone, including visitors and Non-English speakers, can orient themselves and navigate through the space easily. There is a variety of seating that gives choice to the visitor, and amenities for transit users and visitors.

Great spaces have shade – trees or structures – and pedestrian-scale lighting. Shade trees improve the pedestrian environment, increase property values, and reduce urban heat island effects. There is some selected retail, including sidewalk vending, with clear access. Often public art and streetscape elements (plantings, pavement designs, public art, historical markers, wayfinding signage, etc.) reflect the character and ecology of the area and celebrate a city’s past, present and future.



Articulation of buildings and wide sidewalk plazas activate streets.

Great spaces are destinations. They generate daily and seasonal activities, flexibility for spatial and temporal diversity of program. There may be street interventions such as festival

streets, cultural markers, and gateway elements that make the space and adjacent area a place to visit and linger. Utilize seasonal strategies to attract people throughout the year.

Great spaces are also oriented to adjacent land use and support the context around them. Edges of through-ways are buffered. Spaces are designed for identity and image. They are kept clean and safe 24 hours a day and 365 days a year.

UDSOS-G-5 Design with Local Materials

Materials - hardscape and plant material - used for streetscape and placemaking should reflect the character and ecology of the area and celebrate Palmdale’s past, present and future.

UDSOS-G-6 Design with a Family of Elements

Develop a family of design elements that can adjust or respond to the immediate context but that also retains its essence and establishes unity and continuity within the Study Area. This toolkit includes paving materials, colors, textures and patterns; shapes and forms repeated in site furniture, design of spatial layout, planting beds and paths; a color palette used in hard- and softscape. These forms, shapes, patterns, colors, and textures form the design basis for site identity and image and can be part of what defines open space in Palmdale.

UDSOS-G-7 Incorporate Sustainable Strategies

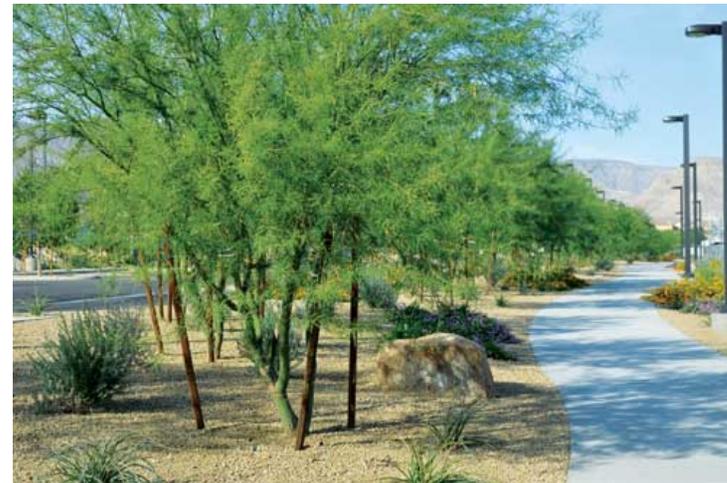
Living with the land, not against it, means acknowledging that water is a limited, shared resource and that we must work as stewards of our natural resources if we want to live well today and plan for future generations. Incorporate Best Management Practices and methods and strategies to collect and distribute stormwater or runoff.

3.3.2 Implementation

MAXIMIZE CONNECTIVITY

**UDSOS-I-1 Connect Existing Assets and Destinations;
Use Unified Design Guidelines**

Create a major greenway corridor along Avenue Q and a roadway network of streets with unified design standards for sidewalks, parkways, curbs, street trees and amenities. *See the Land Use Framework Plan and Transportation Report for street layout, thoroughfare types, and design standards.*



Appropriate street median landscaping for Palmdale’s ecology.

GREAT STREETS: GREEN, COOL*, COMPLETE

UDSOS-I-2 Develop a Street Tree Master Plan

Develop a Street Tree Master Plan to provide orientation, recognition, and wayfinding; establish character; and provide

environmental benefits. Identify key streets and gateway nodes as well as neighborhoods or zones for a consistent appearance in wayfinding, site furnishings and public art that reflects the culture of the city.

*Cool: The use of solar reflective materials to mitigate heat islands so that pavement stays cooler in the sun than conventional paving.

UDSOS-I-3 Design for Green Streets

Design all streets to be green, cool, Complete Streets that support all transportation modes: automobiles, buses, pedestrians, bicycles, taxis, and mobility of the impaired, the young and the elderly.

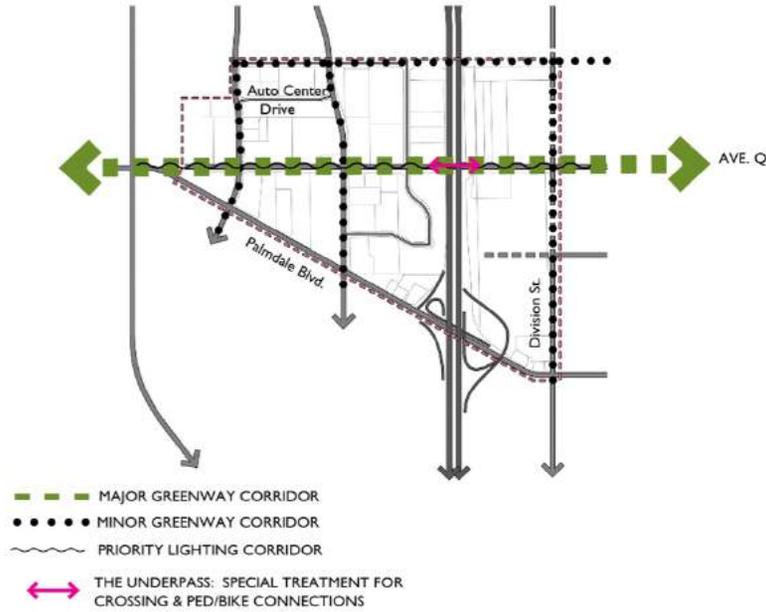
Green Streets Goals:

- Control the sources of runoff, condensate and stormwater to limit pollutants and capture and clean water
- Limit transport of runoff
- Environmentally enhance roads

Green Streets Design Objectives (required):

- Plant climate-appropriate trees and vegetation on both sides of the street
- Use mulch to reduce evaporation of moisture
- Install bioswales to retain and treat runoff and stormwater
- Use curb cuts to direct water into planting areas
- Install permeable pavement that infiltrates water where it falls

Figure 3.3-2: Major and Minor Greenway Corridors - Special Treatments



UDSOS-I-4 Design for ‘Cool’ Streets

‘Cool’ Streets Goals:

- Reduce heat island effect

‘Cool’ Streets Design Objectives (required):

- Plant climate-appropriate trees and vegetation
- Install “cool pavement” to reduce surface temperature (Paving materials on sidewalks, parking lots, and streets that remain cooler than conventional pavements; Can be

created with asphalt and concrete, as well as through the use of coatings or alternate materials)

UDSOS-I-5 Design for Complete Streets

Complete Streets Goals:

- Enable safe access for all users: No one mode of transportation dominates
- Provide a positive experience for all users
- Provide safe routes to schools and parks
- Design for all streets, both phased-in retrofit and new
- Manage for success: cite and fine for abuse or misuse, and educate for good practice

Complete Streets Design Objectives (required):

- Design convenient and accessible paths of travel
- Ensure visibility
- Design well-marked, visible street crossings
- Keep vehicle stop lines back from pedestrian crossings
- Design 5' minimum width for sidewalks
- Provide furnishings through clearly identified zones: each zone may have its own character but within a family of design elements that unifies across zones
- Provide bike parking/racks/corrals
- Provide transit accommodations: bus shelters, benches, posted schedules and fares on streets with transit service
- Provide attractive edge uses: human-scaled with interaction between indoors and out

- Install pedestrian scale lighting:
 - Install at a maximum 14' above adjacent pavement
 - Select closely-spaced fixtures with lower light levels over fixtures spaced further apart that need higher light levels
 - Shield lighting and direct downward
 - Avoid light trespass- spillover into adjacent areas
 - Use more intimate lighting in residential neighborhoods than lighting in public spaces
 - Coordinate light poles with other streetscape elements
 - Coordinate with other utilities (above/below ground)
 - Select white light for safety and general visibility
 - Specify energy-efficient fixtures
 - Create a schedule so that pedestrian lights can be dimmed or turned off if they supplement street lighting when pedestrian activity decreases at night
 - Ensure that lighting is uniform throughout a block

Complete Streets Design Objectives (recommended):

- Install medians and islands where feasible and plant with climate-appropriate material
- Select and install climate-appropriate street trees
- Install bicycle lanes
- Design continuous, comfortable, safe, accessible, wide and maintained sidewalks
- Provide pedestrian lighting

- Install audible signals
- Design with no driveways if properties have alleys
- Use pedestrian count-down timers
- Provide decorative pavement
- Incorporate textured pavers for areas with high volumes of pedestrian traffic
- Design sidewalks with areas to be used for purposes other than circulation: outdoor eating, temporary art installations, food or product carts, farmers markets, hubs for community events, public displays, etc.
- Expand street furnishings (trash cans, news racks, additional street furniture)

CREATE GREAT STREETS IN THE STUDY AREA

UDSOS-I-6 Create a Hierarchy of Corridors

See Figure 3.3-2. Also refer to the Transportation Report and the Land Use Framework Plan.

Major Greenway Corridor: Avenue Q

- Install double allee of climate-appropriate trees
- Design wide sidewalks
- Design in zones that respond to the immediate context but have design elements that are unified with the balance of the City: decorative paving, seating, site path layout, wayfinding, historical markers, etc.
- Create and design spaces, including courtyards and corridors, visible to the street

- Incorporate corner plazas, courtyards, forecourts, and other street-level open spaces to identify and establish special locations in the area
- Create a block-by-block open space network by contributing to street-level interconnectedness
- Establish transition zones between corridor zones
- Design day and nighttime use and include lighting
- Provide site furnishings: seating, trash receptacles, bike corrals/racks

Minor Greenway Corridors (Neighborhood Main Street, Commercial Shared Street)

- Install 5-8' sidewalks with parkway
- Install pedestrian and vehicular lighting
- Create transition zones between public/private
- Install single line of climate-appropriate street trees in parkway, both sides of street
- Install amenities: trash receptacles, seating, bike racks
- Enhance paving

Network of Neighborhood Streets

- Install curbs, curb cuts, ramps
- Install 5-6' sidewalks, with optional parkway (evaluated on block-by-block or neighborhood basis)
- Install single line of climate-appropriate trees in parkway

UDSOS-I-7 Create Great Public Space in the Buffer or Transition Zones

Refer to the Land Use Framework Plan for identification of existing and potential areas for civic plazas, POPOs (Commercial/Business Mix), recreation and open space and shared use spaces.

- Design with a double allee or groves of trees.
- Provide both shaded and sunlit areas during different times of the day. Shade can be provided by trees, shading structures, awnings, canopies or umbrellas.
- Create wide sidewalks.
- Create and design spaces, including courtyards and corridors, visible to the street, visible up close, and visible at a distance. Create gateways for orientation and visibility.
- Incorporate corner plazas, courtyards, forecourts, and other street-level open spaces to identify and establish special locations in the area.
- Provide a variety of open spaces that accommodate different activities and needs. Small, intimate spaces can offer respite from daily activities, while larger, active open spaces can offer a place for meeting people or for events. Select the type of open space that fits best with the scale and use of the surrounding buildings.
- Establish active and flexible open spaces along portions of building frontages for landscaping, outdoor gathering and dining, enhanced sidewalk width, bicycle storage and other amenities that enhance the use of the pedestrian realm. Utilize landscaped perimeter open space at property boundaries to demarcate and screen commercial uses from adjoining residential land uses.
- Include an element of surprise such as change of surface, forms or elements to reflect the character of the space. Special features, choice of materials and color or a unique design or shape can contribute to the distinct character of an open space, ranging from playful to stark or minimalistic.
- Establish transition zones between the back of the sidewalk and street level entries.
- Design open spaces for day and nighttime use and include lighting. Lighting should act as an integral part of the open space design.
- Blend uses and modes: ground floor uses and retail activities spill out into the sidewalks to blur the distinction between public and private space.
- Plan for diverse user groups.
- Provide well-designed seating of different varieties, including seat walls, planter ledges, free-standing elements, benches, moveable seating, fixed seating and seating steps. Seating can also be incorporated in free-flowing, sculptural forms that are part of the landscape design. Seating should be comfortable and designed to human proportions.
- Include landscaped areas and trees in all open spaces. Upper-level and rooftop open spaces should be landscaped and can be opportunities to experience the outdoors and enhance the quality of indoor space.

POPOS: COMMERCIAL COURTYARDS & PLAZAS

While ‘Privately Owned Public Open Space’ (POPOS) refers specifically to private property required to be usable by the public under zoning or similar regulatory arrangements, the phrase in its broadest sense can refer to places like shopping malls and hotel lobbies, that are privately owned and open to the public, even if they are not legally required to be open to the public.

POPOs may look and on the whole feel like public spaces but studies report that there is a set of invisible codes that shape our behavior in public spaces – how to hold yourself, where you think you can sit, who you can talk to – and no one is quite sure what is allowed in POPOs, who is in charge, and what the codes of behavior should be. The tolerances of POPOs are usually tested by pushing the envelope, although San Francisco and New York City have attempted to codify some rules for social aspects of these spaces through city ordinances that include design principles for area and frontage, accessibility, kiosks and cafes, certification, signage, seating, landscaping (tree amount, size, placement), maintenance and compliance.

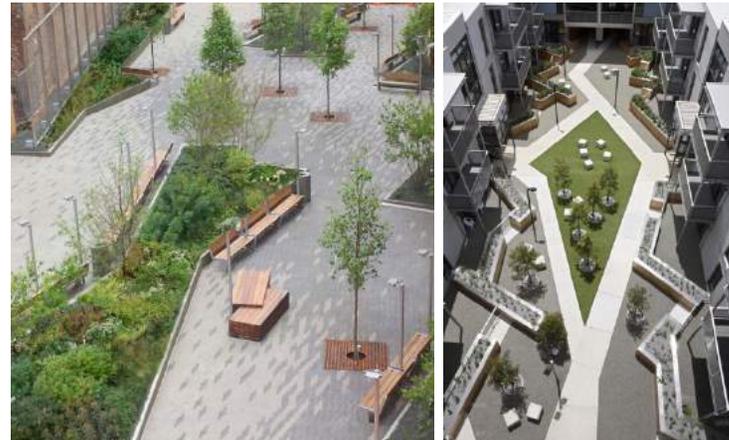
Commercial courtyards and plazas are usually places where the public and employees gather, lunch, stroll during restricted hours – business hours – but should conform to City design standards and be subject to compliance.

UDSOS-I-8 Codify Design Criteria for Privately Owned Public Open Space (POPOs)

Codify rules for social aspects of these spaces through City ordinances that include the following:

- Area dimensions

- Hours of operation
- Locational restrictions
- Access and circulation/ADA compliance
- Sidewalk frontage
- Public transit accommodation
- Permitted obstructions (driveway entrances, parking spaces, mechanical equipment)
- Kiosks and open air cafes
- Certification/City licensing/permitting
- Process
- Seating
- Planting/trees
- Signage
- Maintenance
- Compliance reporting/failure to comply



Privately-Owned Public Open Spaces: Interesting, used, managed.

RECREATION & OPEN SPACE

UDSOS-I-9 Create a Network of Community-Serving Parks and Open Space Corridors

There are currently no parks or developed open space corridors in the Study Area. Develop new parks, including linear parks, buffer zones, and preservation of natural areas that are opportunistically sited. There are identifiable elements that can transform public spaces into vibrant community parks and open spaces:

- Identify talents and assets within the community and build community ownership.
- Design a place that is comfortable and has a strong sense of community.
- Find partners that can support program and activities: institutions, museums, schools, organizations.
- Proposed facilities and functions of new spaces must meet community needs. Evaluate these amenities every 5 years.
- Observe what works in the community, and what doesn't.
- Have a vision about program and activities in the space in order to make a place where people want to be. Develop a diversity of program as well as attractions and destinations that meet the needs of the communities that are adjacent, through the day, the seasons, the year. Program for all ages and abilities.
- Try short-term strategies and use the ones that work.
- Develop site activities and furnishings to bring people together (triangulation) and encourage higher levels of activity and engagement.

Figure 3.3-3: Proposed Development of Open Space Corridors



- Have form support function.
- Understand that good parks and open spaces respond to needs and ongoing changes in the community, so be open to change.
- Use a family of design elements that creates a shared identity and builds a community image.
- Design for safety and accessibility (day and night).

- Design for long-term maintenance: keep spaces safe and clean.
- Design for layout flexibility.
- Design both the ‘inner park’ and the ‘outer park’

UDSOS-I-10 Enhance the Urban Tree Canopy

An urban tree canopy refers to the large population of trees within a city. Urban forestry is the planned, careful management of trees in urban settings to improve the urban environment.

Top five benefits of trees:

- Trees clean the air and provide oxygen. They absorb carbon dioxide, removing and storing the carbon while releasing oxygen back into the air. They absorb odors and pollutant gasses and filter particulates out of the air.
- Trees help clean water and prevent water pollution. They catch rainfall and allow it to flow down the trunk and back into the earth, minimizing the pollutants that are carried by storm water.
- Trees help prevent soil erosion on hillsides or stream slopes.
- Trees mediate the climate, reduce the heat island effect, provide shade canopy and habitat for wildlife.
- Trees can give neighborhoods identity and encourage civic pride.

Enhance Palmdale’s urban tree canopy by:

- Creating linear parks with trees native to the area.
- Installing street and parking lot trees to provide shade and reduce heat island effect.



Phoenix urban forest.

UDSOS-I-II Create Shared Use: Public & Institutional Facilities

There are currently no schools in the Avenue Q Study Area; however, there is an area allocated for a future school and recreation center on Division Street and Avenue Q. (See the Land Use Framework Plan.) Building in joint-use is key to making schools the centers of their neighborhoods. New school design and smart retrofit of existing school can accommodate direct community access to spaces like libraries, gyms, auditoriums, health clinics, athletic and recreational fields and performing arts spaces. Athletic fields and facilities used by schools during the day would be available to the community after school hours and on weekends. Reroute existing fencing or plan more comprehensive solutions. Introduce sustainable practices into school sites.

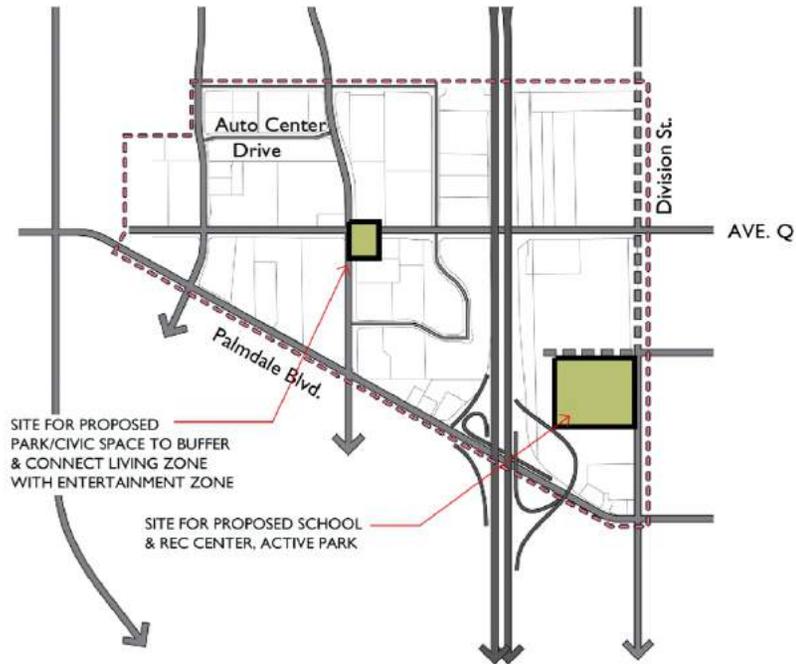


Vista Hermosa Park, Los Angeles: Los Angeles Unified School District space developed by and shared with the community.



Yucca Elementary School: An example of how a school site can be shared with the community. Design the proposed school as to include the opportunity for joint use.

Figure 3.3-4: Proposed Park Sites



DESIGN WITH LOCAL MATERIALS

UDSOS-I-12 Encourage the Use of Local Materials

Reflect the character and ecology of the area and celebrate Palmdale’s past, present, and future through local materials - hardscape and plant material - for streetscape and placemaking.

Agreements between the Palmdale School District and agencies such as Department of Recreation and Culture, Community Programs, Public Works or Neighborhood Services can open controlled areas at schools for community use.



Boulders quarried near Lancaster, appropriate landscape in a desert environment.



Celebrate local materials.

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Ecologically-appropriate plant material looks great. Harvest roof runoff, create bioswales. Design with nature, not against it.

DESIGN WITH A FAMILY OF ELEMENTS

UDSOS-I-13 Develop a Family of Design Elements

Develop a family of design elements that can morph or adjust to respond to the immediate context but that also retains its essence and establishes unity and continuity: same but different.

This tool kit includes paving colors, textures and patterns; shapes and forms repeated in site furniture, design of spatial layout, planting beds and paths; a color palette used in hard- and softscape. These forms/shapes/patterns/colors/textures form the design basis for site identity and image and can be part of what defines open space in Palmdale: elements that apply to streetscape, plazas and courtyards, open space greenbelts, and parks.



Shaded sidewalks with local plant material.

INCORPORATE SUSTAINABLE STRATEGIES

UDSOS-I-14 Harvest Water for Groundwater Recharge

- Incorporate the following methods and strategies throughout the project area for collecting and distributing any collectable Harvest street runoff
 - Use parkways to collect and treat street runoff.
 - Direct water into vegetated swales, depressions with plant material that detain, infiltrate and clean water to reduce runoff, and recharge groundwater.
 - Use permeable paving when feasible.



Capture sidewalk runoff.

- Harvest building roof runoff. Drain into rain gardens, planting areas that detain runoff from roofs and parking lots.
- Harvest condensate

- In a dry climate, a home air conditioner can generate 0.25 gal. of condensate a day, and a large commercial air conditioner can generate 500 gal./day. Condensate is distilled water and does not contain salt although it may contain material leached from the air conditioner’s construction materials.
- Harvest reclaimed water, greywater
- Reclaimed/recycled water, former water treated and used for irrigation or recharging groundwater aquifers.
- Design public areas to maximize pervious pavement and drain to landscaped areas, which allows water to infiltrate into the ground between or through pavers, through subsurface gravel bed. Provide low points on sites to facilitate groundwater recharge.



Capture street runoff, harvest any roof runoff. Bioswales can have different looks.

- Introduce signage that describes the local watershed and rain cycle. Coordinate this with educational efforts in schools.
- Use drought tolerant plant material that grows naturally in the Palmdale area and minimizes need for irrigation and creates habitat for local wildlife.
- Use permeable pavers when possible
- Reclaimed water. Reclaimed/recycled water, former water treated and used for irrigation or recharging groundwater aquifers.



Use permeable paving and recycled water.

RECOMMENDED ZONING REVISIONS

UDSOS-I-15 Plazas, Parks and Open Spaces.

Require land dedication and the collection of facilities financing fees to create a network of neighborhood parks, linear parks, plazas and open spaces, generally following the pattern shown on the Avenue Q Land Use Plan (Figure 1.3-2) and the policies provided in the Urban Design, Street, and Streetscape Standards Plan. In particular:

- Provide an ample neighborhood park in the vicinity of Avenue Q and 5th Street West;

- Create linear parkways in new transit-oriented residential neighborhoods north of Avenue Q;
- Create a connective system of open spaces buffer areas along the freeway, and incorporate natural landscaping and trails;
- Design the land within the future interchange at SR-14 and Palmdale Boulevard to serve as an attractive gateway to Palmdale.

TOD Overlay Zone Standards

The following policies are suggested for the TOD Overlay Zone, a new zoning overlay proposed in the Land Use Framework Plan. The TOD Overlay Zone will be a primary tool in creating a walkable, transit-oriented character and a relationship to the future Palmdale Multimodal Station. The TOD Overlay Zone location is shown in the Land Use Framework Plan and includes the entire Avenue Q Study Area, with the exception of the business and auto center area generally north of Avenue Q and west of SR-14.

UDSOS-I-16 Setbacks and Street Frontage.

In both mixed-use districts, at least 75 percent of street-facing facades of new buildings and building additions must be located at within 8 feet of the front lot line, or 16 feet where outdoor seating or sales are provided. Portions of buildings that are set back further than ten feet should feature publicly-accessible plazas or courtyard entrances.

UDSOS-I-17 Improvement of Street-Facing Setbacks.

Where a front or street-facing side setback is provided, it must be landscaped and/or hard surfaced for use by pedestrians. If hard surfaced, the setback area on each lot must contain at least two pedestrian amenities, such as benches, drinking fountains,

and/or other design elements (public art, planters, and kiosks). Residential buildings are exempt from this requirement.

UDSOS-I-18 On-Site Public Plazas

In all mixed-use zones, outdoor plazas shall be provided within any site with a total of 50,000 square feet or more of floor area devoted to active commercial uses including retail, restaurants, or personal services.

- **Minimum Area.** Public space shall be provided at a rate of five square feet per 1,000 square feet of floor area.
- **Location.** Such public space shall be visible from a public street, or from on-site areas normally frequented by customers, and shall be accessible during business hours.
- **Amenities.** On-site public plaza space shall include benches or other seating, and the ground surface shall be landscaped or surfaced with high-quality paving materials. Amenities shall be included that enhance the comfort, aesthetics, or usability of the space, including but not limited to trees and other landscaping, shade structures, drinking fountains, water features, public art, or performance areas. The placement of shade-bearing elements and seating shall maximize shading for summer mid-day and afternoon hours.

UDSOS-I-19 Required Open Space Buffers

New development of residential uses or community uses such as recreational parks and schools must be adequately buffered from freeways. A 500-foot buffer must be created between any new residential or community use and an existing or planned freeway. Open space buffers must be generously landscaped with climate-appropriate vegetation.

3.3.3 City Requirements & Process

GUIDELINES

Develop guidelines that include topics that are meaningful and relate to the development of Palmdale:

Private Yard Guidelines – Neighborhood Housing

Many residential streets lack sidewalks and public parkway (between street and sidewalk). Continuity on the street edge is important for safe routes to schools and walkability. New development should include design standards for curbs, sidewalks, parkways and any landscaping.

Courtyards & Patios, Multi-Family Housing

Multi-family housing should contain landscaped shared open space with shade trees. The City can address setback requirements, landscape coverage requirements, and landscape design preferences.

Parking Lot Landscaping Guidelines

The City can set requirements for parking lots, including buffers, landscape coverage, canopy coverage and design considerations.



Heat relief in parking lots with appropriate tree species.

Plant Palette

Reevaluate The City’s approved plant list in light of current water management issues and reissue, focusing on low water needs and drought tolerant plant material that reflects the beauty of the region.



Vibrant color, shaded walkways, local plants.

It is also recommended that the City prepare a Master Street Tree Plan, identifying appropriate species for major and minor greenway corridors, gateway planting, and species to contribute to neighborhood or district identity.



Plant in hydrozones.

Irrigation

Match irrigation requirements to plant palette water needs.



Interesting shaded plaza layouts can be compelling without turf or lush plantings.



Desertscape design.



Drought-tolerant material in medians.

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Appendix A: Correspondence between Avenue Q Land Use Framework & Existing Plan and Zoning Districts

TABLE A-1: CORRESPONDENCE BETWEEN TOD LAND USE FRAMEWORK AND EXISTING PLAN AND ZONING DISTRICTS					
TOD Land Use Framework Plan	General Plan	Antelope Valley Auto Center SP	Palmdale Trade & Commerce Center SP	Zoning Ordinance	Notes
Mixed Use					
Transit Village Mixed Use (TVMX) Min. 40 ud/ac Max. 80 du/ac Min. FAR: 1.0 Max FAR: 3.5 5 stories, 55 ft. (60 ft. with ground-floor commercial) With bonus: up to 4.0 FAR	NA	NA	NA	NA	New GP designation and zoning district needed. Map changes required. TOD Overlay provides development standards to ensure good urban form, street orientation
Transit Corridor Mixed Use (TCMX) Min. 18 du/ac Max. 40 du/ac Min. FAR: 0.6 Max FAR: 2.0 4 stories, 45 ft. (50 ft. with ground-floor commercial)	NA	NA	NA	NA	New GP designation and zoning district needed. Map changes required. TOD Overlay provides development standards to ensure good urban form, street orientation

TABLE A-1: CORRESPONDENCE BETWEEN TOD LAND USE FRAMEWORK AND EXISTING PLAN AND ZONING DISTRICTS					
TOD Land Use Framework Plan	General Plan	Antelope Valley Auto Center SP	Palmdale Trade & Commerce Center SP	Zoning Ordinance	Notes
With bonus: up to 60 du/ac, 2.5 FAR, 5 stories, 55 ft. (60 ft. with ground-floor commercial)					
Residential					
High Density Residential (HDR) Min. 30 du/ac Max. 60 du/ac 5 stories, 55 ft.	Medium-High Density Residential 30 to 50 du/ac	NA	NA	High Density Residential (R-4) 30 to 60 du/ac 5 stories, 60 ft.	No change to GP designation or Zoning district is needed. Map changes required. TOD Overlay modifies underlying zoning, limiting to 55 ft. and providing development standards to ensure good urban form
	High Density Residential 50 to 60 du/ac	NA	NA		No change to GP designation or Zoning district is needed. Map changes required. TOD Overlay modifies underlying zoning, limiting to 55 ft. and providing development standards to ensure good urban form
Medium-High Density Residential (MHDR) Min. 16 du/ac Max. 30 du/ac 4 stories, 45 ft.		NA	NA	NA	Create new R-3.5 district based on regulations of C district from PTVSP. Map changes required. Within existing neighborhoods, TOD Overlay modifies underlying zoning, limiting heights within proximity of lower density districts.
Medium Density Residential Min. 6 du/ac Max. 16 du/ac 3 stories, 35 ft.	Medium Residential 6.1 to 10 du/ac	NA	NA	Medium Residential (R-2) 6.1 to 10 du/ac 2 stories, 35 ft.	No change to GP designation or Zoning district is needed. Map changes required. TOD Overlay modifies underlying zoning, allowing up to 16 du/ac

TABLE A-1: CORRESPONDENCE BETWEEN TOD LAND USE FRAMEWORK AND EXISTING PLAN AND ZONING DISTRICTS

<i>TOD Land Use Framework Plan</i>	<i>General Plan</i>	<i>Antelope Valley Auto Center SP</i>	<i>Palmdale Trade & Commerce Center SP</i>	<i>Zoning Ordinance</i>	<i>Notes</i>
					but limiting to 3 stories or 35 ft. and providing additional standards to ensure high-quality neighborhood environment. Map changes required.
	Multi-Family Residential 10.1 to 16 du/ac	NA	NA	Multiple Residential (R-3) Up to 16 du/ac 3 stories, 45 ft.	No change to GP designation or Zoning district is needed. Map changes required. TOD Overlay modifies underlying zoning, limiting to 3 stories or 35 ft.
Commercial, Office and Industrial					
Commercial (C) Max. 1.0 FAR 3 stories, 45 ft.	Community Commercial 1.0 FAR	NA	Planned Development NA 45 ft.	General Commercial (C-3) 1.0 FAR 3 stories, 45 ft.	No change to GP or PTCCSP designation or zoning district is needed. Map changes required. TOD Overlay modifies underlying zoning, providing development standards to ensure good urban form, street orientation.
	Regional Commercial 1.0 FAR	NA	Planned Development NA 45 ft.	General Commercial (C-3) 1.0 FAR 3 stories, 45 ft.	No change to GP or PTCCSP designation or zoning district is needed. Map changes required. TOD Overlay modifies underlying zoning, providing development standards to ensure good urban form, street orientation.

TABLE A-1: CORRESPONDENCE BETWEEN TOD LAND USE FRAMEWORK AND EXISTING PLAN AND ZONING DISTRICTS					
TOD Land Use Framework Plan	General Plan	Antelope Valley Auto Center SP	Palmdale Trade & Commerce Center SP	Zoning Ordinance	Notes
Business Mix (BM) Max. 1.0 FAR 3 stories, 45 ft.	Palmdale Trade and Commerce Center Specific Plan 1.0 FAR	NA	Mixed Use NA 45 ft.	Office Commercial (C-2) 1.0 FAR 3 stories, 45 ft.	No change to GP or SP designation needed. Map changes required.
Auto Center (AC) Max. 1.0 FAR	Antelope Valley Auto Center Specific Plan See Plan for details.	See Plan for details.	NA	NA	No change to GP or SP designation needed. Map changes required.
Public					
Public Facility (PF) Max. 1.0 FAR 3 stories, 45 ft.	Public Facility	NA	Public Facilities	Public Facility (PF) 1.0 FAR 3 stories, 45 ft.	No change to GP or PTCCSP designation or zoning district is needed. Map changes required. TOD Land Use Framework Plan includes policies for provision of public facilities.
Open Space and Recreation (OSR)	Open Space	NA	NA	Open Space and Recreation	No change to GP designation or zoning district is needed. Map changes required. TOD Overlay provides additional standards for providing public and publicly-accessible open spaces. TOD Land Use Framework Plan includes policies for provision and character of public spaces.

Source: Dyett & Bhatia, 2015

Appendix B: Land Use Change from Specific Plans

TABLE B-1: LAND USE CHANGE FROM SPECIFIC PLANS							
Specific Plan Land Use Designations	Antelope Valley Auto Center Specific Plan	Palmdale Trade and Commerce Center Specific Plan				Total Acreage	
	Auto Center	Mixed Use (MU)	Mixed Use (MU) - AICUZ	Planned Development (PD)	Public Facilities (PF)		
Mixed Use							59.2
Transit Village Mixed Use		9.2		14.5			23.6
Transit Corridor Mixed Use	4.5	10.9		15.3	4.9		35.6
Residential							47.3
High Density Residential				8.9			8.9
Medium-High Density Residential		7.6		20.4	1.8		29.9
Medium Density Residential		3.9	3.0	0.0	1.6		8.5
Commercial, Office and Industrial							133.4
Commercial				60.2	7.4		67.6
Business Mix	1.3	42.7					44.0
Auto Center	21.8						21.8
Public							8.0
Public Facility		2.0	3.0		3.0		8.0
Total Acreage		76.3	5.9	119.3	18.7		
	27.5	220.3					247.8

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Appendix C: Projected Future Development

TABLE C-1: PROJECTED DEVELOPMENT – RESIDENTIAL										
Land Use Plan Designations (Base Land Use)	Total Land (ac)	Opportunity Sites (ac)	Allowable Residential Density Range (du/ac)	Assumed Residential Density (du/ac)	Net to Gross Ratio ¹	Assumed Residential Split in Mixed Use Zones ²	Flex Factor ³	Potential Future Opportunity Sites	Existing Units	Total Future Units
Mixed Use										
Transit Village Mixed Use	23.6	16.4	40 - 80	60	0.85	50%	67%	281	0	281
Transit Corridor Mixed Use	35.6	35.6	18 - 40	30	0.60	75%	67%	322	0	322
Residential										
High Density Residential	8.9	8.9	30 - 60	45	0.30	--	67%	79	0	79
Medium-High Density Residential	29.9	29.9	16 - 30	25	0.59	--	67%	297	0	297
Medium Density Residential	8.5	8.5	6 - 16	12	0.62	--	67%	42	0	42
Commercial, Office and Industrial										
Commercial	62.7	50.8	--	--	--	--	--	0	0	0
Business Mix	44.0	27.2	--	--	--	--	--	0	0	0
Auto Center	21.8	13.4	--	--	--	--	--	0	0	0
Public										
Public Facility	8.0	8.0	--	--	--	--	--	0	0	0
Total	242.9	210.8						1,022	0	1,022
Overlay										
Potential Future Open Space and Recreation	43.5	--								
Note: 1. Account for future ROW and future overlay districts (Open Space and Recreation, Public Facility) 2. Account for realistic use split within the mixed use districts. 3. Account for owner properties										

TABLE C-2: PROJECTED DEVELOPMENT – NON-RESIDENTIAL										
<i>Land Use Plan Designations (Base Land Use)</i>	<i>Total Land (ac)</i>	<i>Opportunity Sites (ac)</i>	<i>Allowable Non- Residential FAR Range</i>	<i>Assumed Non- Residential FAR</i>	<i>Net to Gross Ratio¹</i>	<i>Assumed Non- residential Split in Mixed Use Zones²</i>	<i>Flex Factor³</i>	<i>Potential Future Floor Area (Net) (sq ft)⁴</i>	<i>Existing Floor Area (sq ft)⁴</i>	<i>Total Future Floor Area (sq ft)⁴</i>
Mixed Use										
Transit Village Mixed Use	23.6	16.4	1.0 - 3.5	0.5	0.85	50%	67%	73,000	29,000	73,000
Transit Corridor Mixed Use	35.6	35.6	0.6 - 2.0	0.5	0.60	25%	67%	78,000	0	78,000
Residential										
High Density Residential	8.9	8.9	1.0 - 3.5	0.5	0.85	--	--	0	0	0
Medium-High Density Residential	29.9	29.9	0.6 - 2.0	0.5	0.60	--	--	0	0	0
Medium Density Residential	8.5	8.5	1.0 - 3.5	0.5	0.85	--	--	0	0	0
Commercial, Office and Industrial										
Commercial	62.7	50.8	Max. 1.0	0.35	0.67	--	67%	341,000	204,000	204,000
Business Mix	44.0	27.2	Max. 1.0	0.35	0.85	--	67%	227,000	253,000	253,000
Industrial	21.8	13.4	Max. 1.0	0.4	0.76	--	67%	104,000	36,000	36,000
Public										
Public Facility	8.0	8.0	Max. 1.0	0.3	0.00	--	67%	--	--	0
Total	242.9	210.8						823,000	522,000	522,000
Overlay										
Potential Future Open Space and Recreation	44.4	--								
Note: 1. Account for future ROW and future overlay districts (Open Space and Recreation, Public Facility) 2. Account for realistic use split within the mixed use districts. 3. Account for owner properties 4. Rounded to the nearest 1,000										

Appendix D: Acronyms and Abbreviations

AICUZ	Air Installation Compatible Use Zone
AMI	Area Median Income
APZ	Accident Potential Zone
AVACSP	Antelope Valley Auto Center Specific Plan
Du/ac	Dwelling units per acre
FAR	Floor Area Ratio
GP	General Plan
LEED	Leadership in Energy & Environmental Design
PD	Planned Development
PTC	Palmdale Transportation Center
PTCCSP	Palmdale Trade and Commerce Center Specific Plan
PTVSP	Palmdale Transit Village Specific Plan
SR	State Route
TOD	Transit-Oriented Development
VMT	Vehicle Miles Travelled

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DYETT & BHATIA
Urban and Regional Planners

755 Sansome Street, Suite 400
San Francisco, California 94111
☎ 415 956 4300 📠 415 956 7315