Mira Mesa Community Plan

FINAL Transportation Impact Study

Prepared for:

The City of SAN DIEGO

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1.0 INTRODUCTION

1.1 Purpose of the Report

This Transportation Impact Study (TIS) serves to identify and document potential CEQA transportation impacts related to buildout of the Mira Mesa Community Plan Update proposed land uses and mobility network (Proposed Project), and alternatives evaluation, as well as to recommend improvements/ mitigation measures as appropriate.

Figure 1-1: Mira Mesa Community Planning Area within the Regiondisplays Mira Mesa's location in the San Diego Region.

Study Scenarios

Four (4) mobility scenarios were evaluated, including one (1) land use density alternative. The four scenarios consist of the following:

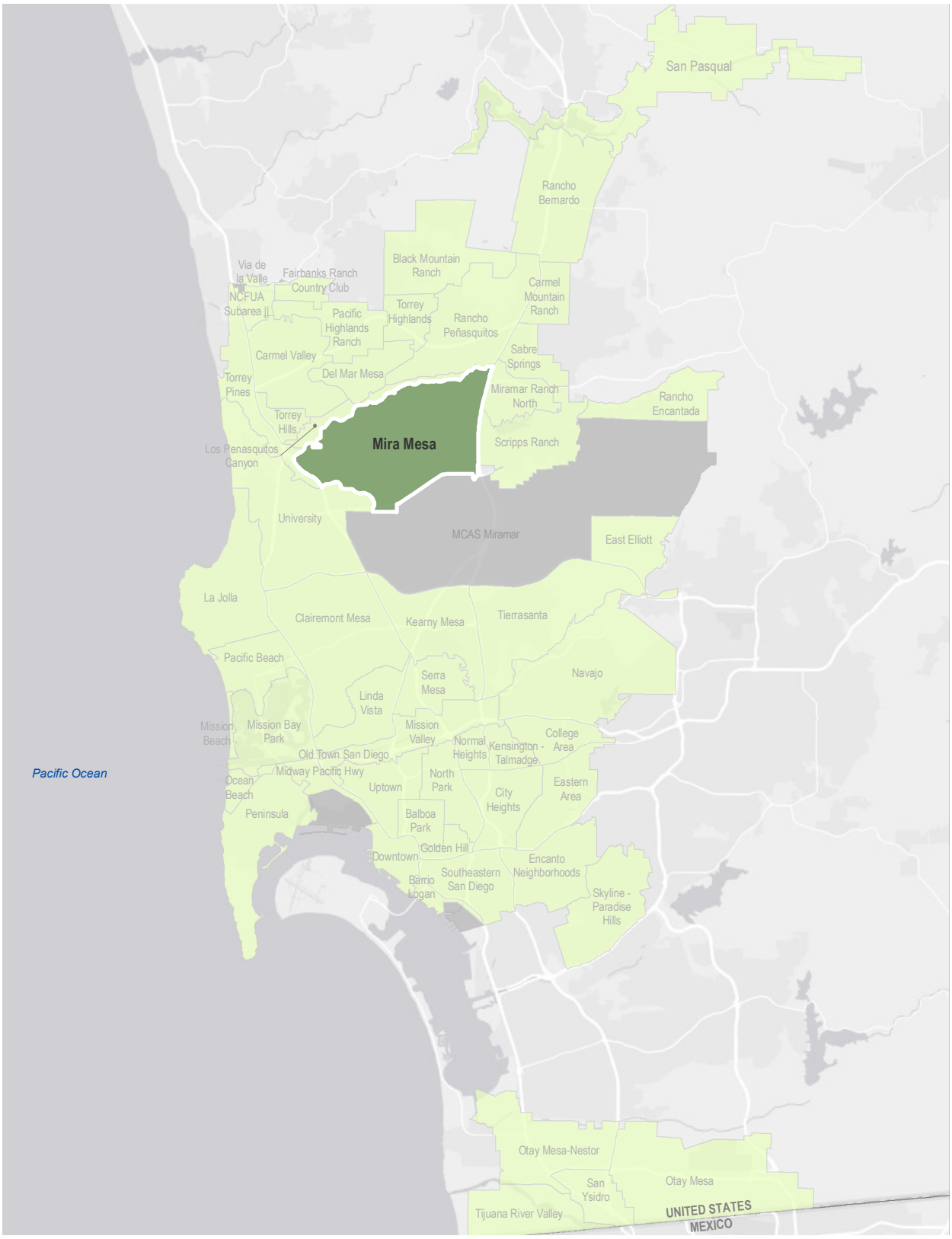
- Base Year (2012) – establishes the existing baseline VMT within the project study area based on the SANDAG Series 13 Regional Model Base Year (2012) calibrated for Mira Mesa.
- No Project (Adopted Plan) – represents buildout of the currently adopted Mira Mesa Community Plan land uses and mobility network, including all amendments to the Community Plan from its original adoption in 1992 to the most recent amendment in 2021.
- Proposed Community Plan Update (Proposed Project) – represents buildout of the Proposed Project land uses and mobility network, which were developed in collaboration with community members, City staff, and the project consultant team. A summary of the proposed land uses is provided in ***Chapter 2*** of this report, while the detailed network development process and recommendations are provided in ***Chapter 4***.
- Project Alternative (Medium-Density Alternative) – represents the same proposed mobility network particularly within the Urban Village areas, but with a reduction in the residential density

All study scenarios were modeled using the calibrated SANDAG Series 13 Regional Model – Mira Mesa Community Plan Update Subarea Model (the "Model"). This customized Model assumed buildout of the proposed Mira Mesa land uses and the respective mobility networks for Mira Mesa, as well as the Horizon Year 2050 land uses and transportation improvements for the rest of the San Diego region. Detailed modeling information and documentation can be found in ***Chapter 4*** of the *Mira Mesa Mobility Technical Report* (MTR) (August 2022). Details on the mobility network recommendations and results of implementation can be found in Chapter 3 and Chapter 5 of the MTR.

This report has been prepared in accordance with the City's compliance with the SB 743 legislation specified by the Governor's Office of Planning (OPR). SB 743 removes traffic Level of Service (LOS) as a metric for determining significant environmental impacts for transportation and replaces it with Vehicle Miles Traveled (VMT) as the primary measure of transportation impacts.

For the purpose of the transportation impact study, Plan-to-Ground analysis was conducted by comparing the Proposed Project and the various alternatives to Base Year (2012), which is representative of baseline conditions.

Figure 1-1



Mira Mesa within the Region

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1.2 Report Organization

The remainder of this report is organized into the following chapters:

- ***2.0 Project Description*** – Summarizes the land uses for the Base Year and Proposed Community Plan Update (Proposed Project).
- ***3.0 Analysis Methodology*** – Describes the methodologies and standards utilized to analyze the CEQA transportation impacts for all scenarios.
- ***4.0 Project Impacts*** – Discusses the VMT analysis and potential CEQA transportation impacts of the Proposed Project and identifies mitigation measures for significant transportation impacts, as necessary.
- ***5.0 Vehicle Miles Traveled for GHG Analysis Purposes*** – Discusses the VMT data required for the Greenhouse Gas (GHG) Emissions analysis of the Proposed Project. VMT for GHG analysis is based on the project VMT generated and is provided for the Base Year and the Proposed Project.
- ***6.0 Alternatives Analysis*** – This chapter discusses the VMT analysis and potential transportation impacts of the project alternatives including the Adopted Plan and the Medium-Density Alternatives.

2.0 PROJECT DESCRIPTION

The Proposed Project includes an update of the currently Adopted Community Plan to address future growth and development in the Mira Mesa community. **Table 2-1** summarizes key Mira Mesa land uses for the Base Year and Proposed Project.

Table 2-1: Land Use Summary

Land Use[1]	2012 Base Year	2050 Proposed Project
Dwelling Units	24,949	58,741
Commercial Retail + Visitor Retail	5,664,348	6,757,275
Office (sf)	9,445,503	16,753,537
Industrial (sf)	27,113,012	33,650,802
Institutional + Education (sf)	2,352,053	2,921,247

Source: City of San Diego (2021)

Notes:

[1] Land uses provided in this summary table reflect the primary vehicular traffic generating uses in the community. Land uses not included this table include parks and recreational uses, open space, transportation/utilities (e.g., airport runways, transit stop facilities, etc.), and vacant areas.

[2] sf = square feet

The Mira Mesa Community Plan Update will provide a better balance of jobs and housing. A key component of the Proposed Project scenario is compact and pedestrian-friendly infill development in new mixed-use village areas, focusing the growth in the employment areas and areas near frequent transit making the community more walkable and bikeable. This is intended to increase transit usage by leveraging robust future investments in transit infrastructure and service frequency near new residences and employment hubs. The plan strives to be in alignment with the City's General Plan and Climate Action Plan (CAP).

2.1 Key Land Use Changes

Between the Base Year and the Proposed Project scenario, the number of dwelling units would increase by 135%. As a result, the Proposed Project scenario substantially increases the dwelling unit capacity beyond what is currently available. The Proposed Project calls for a greater number of multifamily units in a mixed-use setting (i.e., residential units integrated within the same building as office and/or retail uses) within employment areas.

The commercial land uses would increase by 19.3% from the Base Year to Proposed Project. The office land use would increase by 77% from the Base Year to the Proposed Project. The industrial land use would have a 24% increase from the Base Year to the Proposed Project. The institutional land uses would increase by 24.2% from the Base Year to the Proposed Project. The educational land uses in the Proposed Project would have a slight increase of 7% over the Base Year.

2.2 Multi-Modal Changes

Mira Mesa's transition to a more urbanized, high-intensity land use pattern under the Community Plan Update would require equally supportive mobility infrastructure, public improvements, and policies focused on better serving pedestrians, bicyclists and transit users, in addition to motorists. The Proposed Project promotes an integrated multimodal network that prioritizes active modes of transportation and

capitalizes on transit investments. Mobility is closely linked to the Urban Design, Urban Villages, and Community Plan Implementation Overlay Zones (CPIOZ). CPIOZs are a tool to provide supplemental development regulations that are customized to specific sites within community plan areas of the City. These regulations support increased active transportation facilities and access including the implementation of urban pathways and new pedestrian connections. In combination with policies to provide enhancements to streetscapes and street functionality that support pedestrian, bicycle, and transit activity and complete streets features. The proposed mobility improvements include planned implementation of multi-use paths and cycle tracks, providing enhanced pedestrian and bicycle facilities throughout the community. Details on the network development process and recommendations can be found in ***Chapter 4*** of this report.

3.0 ANALYSIS METHODOLOGY

This chapter describes the CEQA transportation impact analysis methodology that was prepared in accordance with the City's compliance with the SB 743 legislation and the California Environmental Quality Act (CEQA) project review process.

3.1 Data Sources and Methods

Population and employment data were obtained from the San Diego Association of Governments' (SANDAG) Series 13 Activity Based Model (ABM), which was calibrated and customized for the Mira Mesa Community Plan Update. The ABM is a travel demand forecasting model that incorporates census data and travel surveys to inform the algorithms of the model's projections. It uses a simulated population based on existing and projected demographics to match residents to employment and forecasts the daily travel on the regional transportation network. In addition, the model is able to estimate the daily travel of individuals in the simulated population, including origins, destinations, travel distances and mode choices. The Series 13 ABM has four (4) forecast years: 2012, 2020, 2035, and 2050. The regional forecast for the listed years can be found at SANDAG's Transportation Forecast Information Center (http://tfic.sandag.org/).

For the Mira Mesa CPU, the 2012 forecast was calibrated using detailed existing land use inputs for the Mira Mesa study area. In addition, the local transportation network was refined to more closely match ground conditions in 2012. By refining land use and network assumptions, a Base Year scenario was developed that closely matched travel conditions in 2012. With the calibrated base year model as a foundation, the Proposed Project, Adopted Plan, and Medium-Density Alternative scenarios were also developed with a build-out year of 2050. These scenarios provided the relevant traffic data and metrics for the analysis.

In consultation with SANDAG modelers, additional model output data was provided to support the Mira Mesa CPU efforts and some of these methodologies are documented in the Vehicle Miles Traveled Calculation Using the SANDAG Regional Travel Demand Model – Technical White Paper (San Diego Institute of Transportation Engineers, May 2013) provided in **Appendix A**. SANDAG produced relevant metrics and reports specific to the Mira Mesa modeling scenarios, including the following information:

- Vehicle Miles of Travel Report (SB 743 metrics for residential and employment) – **Appendix B**
- Disaggregated VMT for Mira Mesa Select Zone (VMT for GHG Analysis) – **Appendix C**

Activity Based Model (ABM) Background

The ABM is a complex travel demand model that can track the characteristics of each simulated traveler and can analyze the travel patterns of a wide area throughout an entire day. When simulating a person's travel patterns, the ABM takes into consideration a multitude of personal and household attributes to ensure that people move from one place to another in a realistic manner. Each model run "scenario" reflects a specific year, land use scenario, and transportation network. After an ABM scenario is constructed, it produces a loaded roadway network that provides projected daily vehicle, bike, and pedestrian volumes, as well as transit ridership on each link in the network. Detailed modeling information and documentation can be found in Chapter 4 of the *Mobility Technical Report*.

3.2 Determination of CEQA Transportation Significant Impacts

Project-specific significance thresholds for the Mira Mesa Community Plan Update have been developed to guide programmatic analysis for the Proposed Project. A significant transportation impact could occur if the Proposed Project:

1. Results in a conflict with an adopted program, plan, ordinance, or policy addressing the transportation system, including transit, roadways, bicycle and pedestrian facilities;
2. Substantially increases hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
3. Results in vehicle miles traveled (VMT) exceeding thresholds for City of San Diego's compliance with SB 743 legislation, as identified in **Table 3-1**, Significance Thresholds for Transportation VMT Impacts by Land Use Type; or
4. Results in inadequate emergency access.

Table 3-1: Significance Thresholds for Transportation VMT Impacts by Land Use[1]

Land Use Type	Threshold for Determination of a Significant Transportation VMT Impact
Residential	15% below regional mean[2] VMT/Capita
Employment	15% below regional mean[2] VMT/Employee
Retail	Net increase in total regional VMT[2]

Source: City of San Diego (2020)

[1] The thresholds included in this table are for the pertinent land use types of the Proposed Project. Other land use thresholds (e.g., hotel, institutional, mixed-use, etc.) have been excluded as those thresholds are more land use specific and for project- level analyses.

[2] The regional mean and total VMT are determined using the Base Year (2012) of the current version of the SANDAG Regional Travel Demand Model (Series 13, version 13.3.2) that has been calibrated for Mira Mesa.

These VMT thresholds provided in **Table 3-1** were developed based on SB 743 legislation and the Governor's Office of Planning and Research's (OPRs) Technical Advisory on Evaluating Transportation Impacts in CEQA, which covers specific changes to the CEQA guidelines and contains OPR's technical recommendations related to the use of VMT, as the preferred CEQA transportation metric.

The following definitions describe how VMT is referred to, calculated, and accounted for in this CEQA impact analysis:

- Resident VMT/Capita includes, for all San Diego County residents, all vehicle-based resident travel grouped and summed to the home location of the individual. It includes all resident vehicle travel: home-based and non-home-based. The VMT for each individual is then summed for all individuals residing in a particular census tract and divided by the population of that census tract to arrive at Resident VMT/Capita.
- Employee VMT/Employee includes, for all San Diego County residents, all vehicle-based employee travel grouped and summed to the work location of the individual. This includes all employee travel, not just work-related trips. The VMT for each work location is then summed for all work locations in a particular census tract and divided by the number of employees of that census tract to arrive at Employee VMT/Employee. This does not include employees whose work location is specified as home.
- Mira Mesa Total Retail VMT is the sum of all vehicle mile trips generated by trips for retail uses in the community multiplied by their associated trip lengths.

4.0 IMPACT ANALYSIS

This chapter presents the assessment of transportation impacts resulting from the Proposed Project.

4.1 Issue 1: Conflicts with Current Plans/Policies

Would the Proposed Project conflict with an adopted program, plan, ordinance, or policy addressing the transportation system, including transit, roadways, bicycle and pedestrian facilities?

The Proposed Project is consistent with the Mobility Element of the General Plan and other adopted policies, plans, or programs supporting the transportation system, as it strives to improve mobility through a balanced, multi-modal transportation network with planned improvements to pedestrian, bicycle, transit, and roadway facilities. Additionally, the Proposed Project would provide policies that support such multi-modal improvements. Thus, the Proposed Project would not conflict with adopted policies, plans, or programs related to the transportation system as discussed below.

Policies contained in the proposed Community Plan Update (CPU) would support improvements to pedestrian, bicycle, transit, and roadway facilities. It should be noted that implementation of some of these transportation infrastructure improvements, such as multi- use paths and higher quality bicycle facilities, may necessitate on-street parking removal, additional right- of-way, and/or require the redevelopment of adjacent properties. All transportation facilities would be designed in accordance with applicable City standards. Thus, the Proposed Project would not conflict with adopted policies, plans, or programs related to the transportation system. Impacts would be less than significant.

4.1.1 Pedestrian Facilities

The Proposed Project includes a network of planned pedestrian facilities to support the level of pedestrian traffic in the area. The following pedestrian facilities/improvements are planned for the Mira Mesa community as part of the Proposed Project:

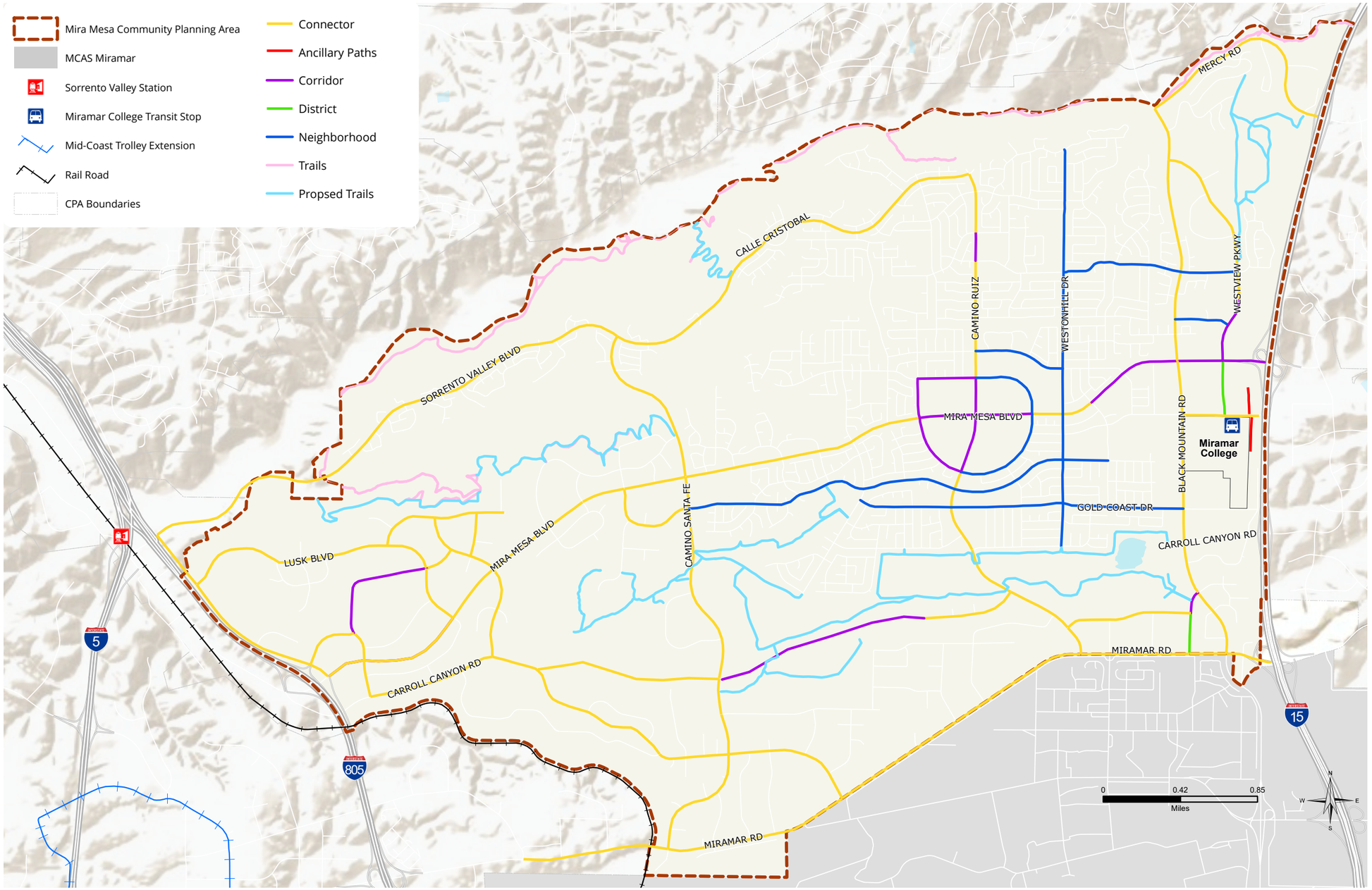
Pedestrian Route Types

Pedestrian route types are used to categorize pedestrian facilities along roadways based on adjacent uses and the walking environment. The City of San Diego Pedestrian Master Plan (City 2006) defines route types and the level of treatments or features that best supports the specific area's walking environment.

Figure 4-1: displays the pedestrian route types for the Proposed Plan.

- Intersection Pedestrian Enhancements at all signalized and unsignalized crossings are proposed to be upgraded to current City standards, including ADA compliant pedestrian ramps, high visibility continental crosswalks, advanced stop bar placement, and pedestrian countdown signal timers (at signalized intersections only).
- A series of urban and pedestrian pathways have been identified in the Proposed Plan to create stronger bicycle and pedestrian connections in the central core of the community and in newly identified mixed-use residential areas and urban villages. These pathways support the vision for a vibrant and walkable employment and residential environment in Mira Mesa. They have been woven into the community's focus areas in Mira Mesa to help to transform superblocks into permeable environments resulting in more direct and convenient pedestrian connections. They can be combined with linear parks, plazas, and streetscape elements to provide a connected and attractive pedestrian network.
- These ancillary facilities will be constructed through the development process and are therefore located in the concentrated redevelopment areas of the Urban Villages and CPIOZ. The Urban Design Element of this Community Plan Update provides more details on the urban and pedestrian pathway locations.

Figure 4-1



Mira Mesa Pedestrian Route Typologies

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Segment Improvements

New Sidewalks

New sidewalks along several locations within Mira Mesa are included in the Proposed Plan. This includes upgrading all asphalt paths to concrete sidewalks to meet City of San Diego and ADA requirements, as well as the construction of all missing sidewalk segments with the exception of Vista Sorrento Parkway where a wide multi-use path along the east side of Vista Sorrento Parkway is recommended to accommodate pedestrians and bicyclists traveling north-south along this high-speed corridor.

Lead Pedestrian Intervals

Lead Pedestrian Intervals (LPIs) are proposed at several signalized intersections to improve pedestrian safety especially where higher volumes of pedestrians are anticipated and where conflicts with right turning vehicles exist.

LPIs are recommended at the following intersections where pedestrians crossings are permitted:

- Mira Mesa Boulevard and Sequence Drive / Huennekens Street
- Mira Mesa Boulevard and Reagan Road
- Mira Mesa Boulevard and Village at Mira Mesa Driveway
- Mira Mesa Boulevard and Camino Ruiz
- Mira Mesa Boulevard and New Salem Street / Marauder Way
- Mira Mesa Boulevard and Greenford Drive
- Mira Mesa Boulevard and Westmore Road / Marbury Avenue
- Mira Mesa Boulevard and Black Mountain Road
- Mira Mesa Boulevard and Westview Parkway
- Mira Mesa Boulevard and I-15 Southbound Ramps
- Carroll Canyon Road and Camino Santa Fe
- Target / Hobby Lobby Driveway and Camino Ruiz
- Reagan Road / Marauder Way and Camino Ruiz
- New Salem Street and Camino Ruiz
- H Mart Driveway and Camino Ruiz
- Capricorn Way and Camino Ruiz
- Gemini Avenue and Black Mountain Road
- Hillery Drive and Black Mountain Road
- Miramar College Driveway and Black Mountain Road
- Gold Coast Drive and Black Mountain Road
- Carroll Center Road and Black Mountain Road / Kearny Villa Road
- Activity Road and Black Mountain Road
- Mira Lee Way and Westview Parkway
- Galvin Avenue and Westview Parkway
- Barnes Canyon Road and Lusk Boulevard
- Mira Sorrento Place and Scranton Road

Curb Extensions (Pop-Outs)

As part of the pedestrian network evaluation, several key intersections were identified as locations where crossings connect with potential high-volume paths of travel and/or a combination of both pedestrian and bicycle facilities. At these locations, enhanced pedestrian crossings should be considered including curb extensions to shorten crossing distances and increase visibility of pedestrians. Curb extensions also serve as a traffic calming measure, oftentimes reducing vehicular speeds along a corridor.

The following corridors were identified:

- Gold Coast Drive
- Hillery Drive
- New Salem Street
- Capricorn Way
- Flanders Drive
- Westmore Road
- Aquarius Drive
- Santa Arminta Avenue
- Parkdale Avenue
- San Ramon Drive

Additional Safety Enhancements

Safety assessments were performed at eight intersections in the Mira Mesa community with the highest number of pedestrian-related collisions in the most recent 5-year period with available data. Many of the strategies already discussed in this section (i.e. curb extensions, LPIs, high-visibility crosswalks, advanced stop bars, and pedestrian countdown timers) are all pedestrian safety enhancements recommended in the Community Plan. The following strategies are proposed to supplement those enhancements to further reduce the number of pedestrian-related collisions at these intersections:

- *Traffic signal upgrades at Mira Mesa Boulevard and Westmore Road/Marbury Avenue*: Upgrade the existing traffic signals on the north and south legs to a mast arm to increase motorists' cone of vision while navigating through the intersection.
- *Pedestrian bridge east of Mira Mesa Boulevard Westview Parkway*: Discussed in the next section of this report.
- *Intersection improvements are proposed at Camino Ruiz and Capricorn Way*: Modify the eastbound and westbound left turn lanes and protected left turn phasing to reduce the number of pedestrian-related left-turn collisions.
- *Signal phasing modification at Black Mountain Road and Gemini Avenue*: Modify the signal phasing to provide eastbound and westbound protected left turn phases.
- *Signal improvements at Camino Ruiz and Reagan Road/Marauder Way*: Add a "no right turn on red" restriction to reduce the number of pedestrian-related right-turn collisions.

Bridge Connections

In general, pedestrian crossings should be provided at grade unless special circumstances apply. A pedestrian bridge improves the pedestrian environment by providing a connection/crossing free from conflicts with vehicles. When constructed, the following rules of thumb should be considered:

- Should not increase the distance of travel by more than 50% as compared to the at-grade crossing
- Safety, lighting, graffiti, security
- Structure should positively affect the identity of the area and should not adversely impact the surrounding urban environment
- Structure should be as close as possible to the intended desire line
- Adequate space on both sides of the roadway to have landing areas that allow for the vertical elevation to be established and accessibility by people of all abilities.

The following locations are proposed for future pedestrian bridges in Mira Mesa:

- Across Mira Mesa Boulevard (between Westview Parkway and I-15 ramps): A pedestrian bridge between Westview Parkway and I-15 southbound ramps could provide a pedestrian crossing (free of vehicular conflict) between the large residential development on the north side of Mira Mesa Boulevard (Casa Mira View) to the existing and proposed commercial activity center (identified as Mira Mesa Gateway in Community Plan), Miramar College Transit Station, and Miramar College located on the south side of Mira Mesa Boulevard. Mira Mesa Boulevard experiences high vehicular traffic volumes (almost 90,000 ADT) and high vehicle speeds due to the proximity to the freeway ramps. A pedestrian bridge would provide a grade-separated crossing for the large number of pedestrians currently needing to cross 12 lanes of traffic.
- Across I-15 near the Hillery Drive Bridge: A pedestrian bridge connecting Mira Mesa to Scripps Miramar Ranch across I-15 would provide an essential low-stress east-west connection from high residential redevelopment areas in both communities to schools, transit centers, and recreational facilities from both communities. A feasibility study would need to be performed to determine the best location for a structure across the I-15 freeway. Options would include extending the existing Hillery Drive bridge Direct Access Ramp bridge all the way across the freeway, connecting Scripps Lake Drive to North Campus Drive, connecting South Campus Drive to Scripps Ranch High School, or connecting Gold Coast Drive to Scripps Ranch Court.

4.1.2 Bicycle Facilities

The Proposed Project would support existing plans and policies relative to the bicycle network. The bicycle facility network for the Proposed Project is shown in **Figure 4-2**. Bicycle-focused policies in the proposed CPU include implementation of new separated and on-street bicycle facilities, installation of bicycle parking facilities, and increasing the level of bicycle comfort and safety for all levels of bicycle riders. Proposed CPU policies support coordination with SANDAG on the planning and implementation of regional bicycle facilities and support increased bicycle comfort and safety, repurposing right-of-way for bicycle facilities, and bike sharing. Thus, implementation of the Proposed Project would not conflict with adopted policies, plans, or programs supporting bicycle facilities.

A key focus of the San Diego Regional Bike Plan prepared by SANDAG is to develop an interconnected network of bicycle corridors to improve the connectivity and quality of bicycle facilities and their supporting facilities. Similarly, the City of San Diego Bicycle Master Plan establishes guidance on achieving an ideal bicycle environment throughout the City and refines the Regional Bike Plan to include community-wide bicycle facilities. Together, these facilities promote intra-community and inter-community bicycle trips to

strengthen connections within the planning area and between adjacent communities.

The Proposed Project includes improving existing facilities identified in the Regional Bike Plan and City of San Diego Bicycle Master Plan and identifying new recommendations with an emphasis on protected facilities such as multi-use paths and cycle tracks. The Proposed Project recommends a variety of bicycle facilities on the local street network, including multi- use paths (Class I), bicycle lanes (Class II), bicycle routes (Class III), cycle tracks (Class IV), and shared bus-bike lanes.

The following bicycle facilities are planned for the Mira Mesa community as part of the Proposed Project, City's Bicycle Master Plan, and/or the San Diego Regional Bike Plan, Riding to 2050.

Class I Multi Use Path

- New trail connection from Flanders Drive to Camino Santa Fe
- New "rails to trails" connection along old rail line traversing through Carroll Road, Production Avenue, and Distribution Avenue
- New trail connection from Gold Coast Drive towards Hillery Drive
- Vista Sorento Parkway from Mira Sorrento Place to Sorrento Valley Boulevard (two-way, east side)
- Rickert Road from HIllery Drive to Mira Mesa Boulevard (two-way, west side)
- Mira Mesa Boulevard from Marauder Way to Greenford Drive (one-way, both sides)
- Mira Mesa Boulevard from Greenford Drive to I-15 (one-way, both sides)
- Mira Mesa Boulevard from Dabney Drive to Reagan Road (one-way, both sides)

Class II Bike Lanes

- Barnes Canyon Road from Morehouse Drive to Lusk Boulevard
- Scranton Road / Barnes Canyon Road from Lusk Boulevard to Pacific Heights Boulevard
- Pacific Center Boulevard from Lusk Boulevard to Pacific Center Court*
- Pacific Heights Boulevard from Pacific Center Boulevard to Carroll Canyon Road (southbound only)*
- Pacific Heights Boulevard from Mira Mesa Boulevard to Pacific Center Boulevard (northbound only)*
- Oberlin Drive from Scranton Road to Mira Mesa Boulevard
- Flanders Drive from Mira Mesa Boulevard to Keoki Street*
- Camino Ruiz from Calle Cristobal to New Salem Street (southbound only)
- Miramar Road from western community boundary to Camino Ruiz (westbound only)*
- Carroll Road from Camino Santa Fe to Miramar Road
- Westonhill Drive from Gold Coast Drive to Mira Mesa Boulevard*
- Capricorn Way from Westview Parkway to Black Mountain Road
- Galvin Avenue from Westview Parkway to Black Mountain Road*
- Black Mountain Road from Hillery Drive to Kearny Villa Road

Figure 4-2

LEGEND

- Mira Mesa Community Plan Boundary
- City and County Parks
- Focus Areas
- Schools
- Future Development

Existing Bicycle Facilities to Remain

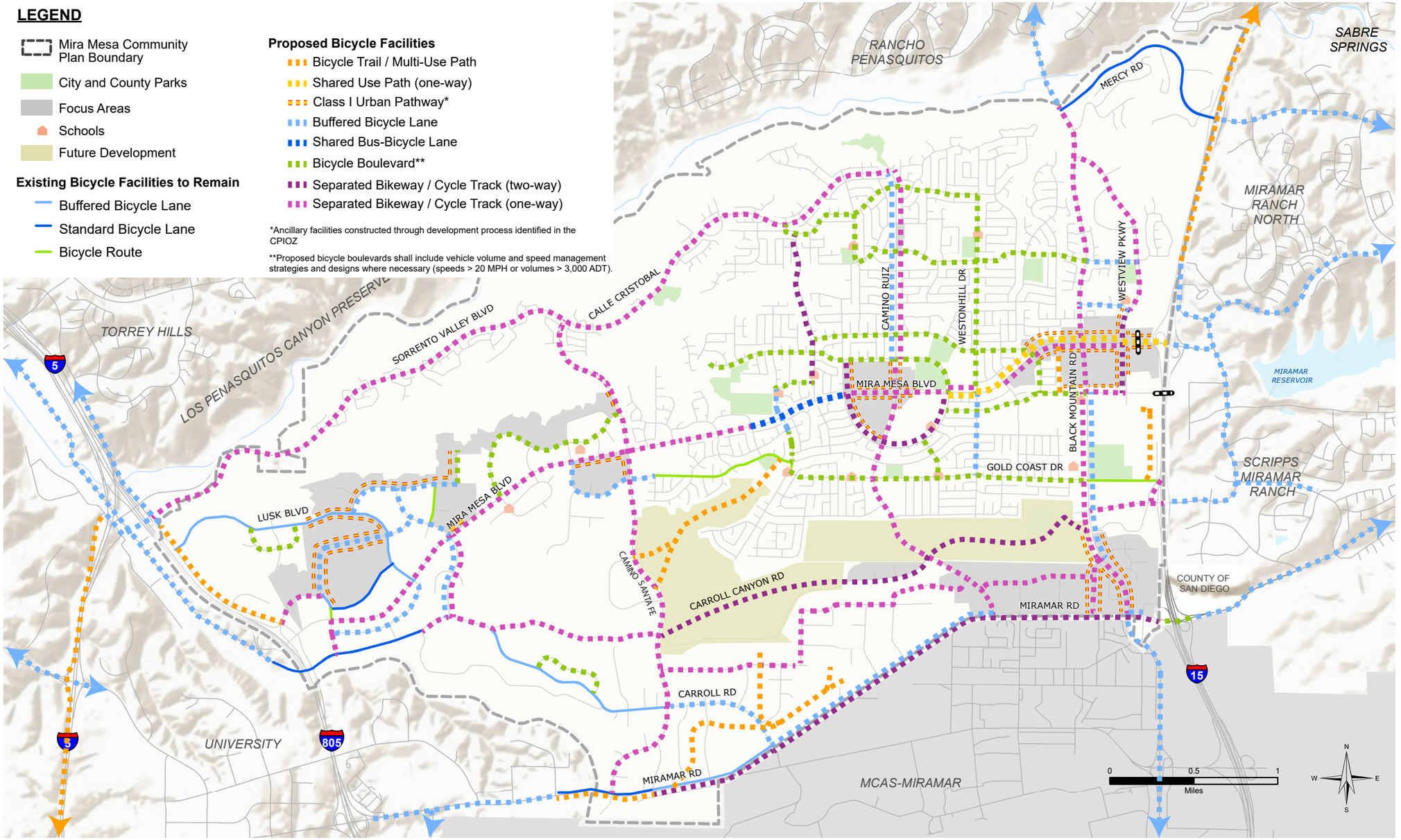
- Buffered Bicycle Lane
- Standard Bicycle Lane
- Bicycle Route

Proposed Bicycle Facilities

- Bicycle Trail / Multi-Use Path
- Shared Use Path (one-way)
- Class I Urban Pathway*
- Buffered Bicycle Lane
- Shared Bus-Bicycle Lane
- Bicycle Boulevard**
- Separated Bikeway / Cycle Track (two-way)
- Separated Bikeway / Cycle Track (one-way)

*Ancillary facilities constructed through development process identified in the CPIOZ

**Proposed bicycle boulevards shall include vehicle volume and speed management strategies and designs where necessary (speeds > 20 MPH or volumes > 3,000 ADT).



Bicycle Network – Proposed Plan Conditions

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Class III Bike Routes

- Wateridge Circle from Lusk Boulevard (E) to Lusk Boulevard (W)
- Pacific Mesa Boulevard from Pacific Heights Boulevard to Pacific Center Boulevard
- Sequence Drive from Mira Mesa Boulevard to Camino Santa Fe
- Gold Coast Drive from Parkdale Avenue to Westonhill Drive
- Flanders Drive from Parkdale Avenue to Keoki Street
- Gold Coast Drive from Westonhill Drive to Maya Linda Road
- Hillery Drive from Marauder Way to Black Mountain Road
- San Ramon Drive from Gold Coast Drive to Marauder Way
- Carroll Park Drive/Brown Deer Road from Carroll Road (N) to Carroll Road (S)
- New Salem Street from End of Roadway to Mira Mesa Boulevard
- Alcamo Road from Parkdale Avenue to Montongo Street
- Parkdale Avenue from Dancy Road to Gold Coast Drive
- Westmore Drive / Marbury Avenue from Montongo Street to Hillery Drive
- Aquarius Drive / Santa Arminta Avenue from Calle Cristobal to Westonhill Drive
- Capricorn Way from Zapata Avenue to Black Mountain Road
- Avenida Del Gato from Aquarius Drive to Capricorn Way

Class IV Cycle Track (One-Way Bikeway)

- Sorrento Valley Boulevard/Calle Cristobal from Vista Sorrento Parkway to Camino Ruiz
- Camino Santa Fe from Miramar Road to Calle Cristobal
- Mira Mesa Boulevard from Scranton Road to Aderman Avenue
- Mira Mesa Boulevard from Reagan Road to Marauder Way/New Salem Street
  Mira Mesa Boulevard from Marauder Way/New Salem Street to Westonhill Drive (westbound only)
- Mira Mesa Boulevard from Greenford Drive to Westview Parkway (eastbound only)
- Camino Ruiz from Miramar Road to New Salem Street*
- Camino Ruiz from New Salem Street to Calle Cristobal (northbound only)*
  Pacific Heights Boulevard from Carroll Canyon Road to Mira Mesa Boulevard (northbound only)*
- Black Mountain Road from Miramar Road to Kearny Villa Road*
- Black Mountain Road from Kearny Villa Road to Hillery Drive (southbound only)*
- Black Mountain Road from Hillery Drive to Mercy Road
- Westview Parkway from Galvin Avenue to Black Mountain Road*
- Activity Road from Camino Ruiz to Black Mountain Road*
- Scranton Road from Morehouse Drive to Carroll Canyon Road
- Trade Street from Camino Santa Fe to Trade Place*
- Miralani Drive from Cabot Drive to Camino Ruiz*
- Arjons Drive from Trade Place to Cabot Drive/Miralani Drive*
- Trade Place from Trade Street to Arjons Drive*
- Maya Linda Road from Carroll Canyon Road to Gold Coast Drive
- Carroll Canyon Road from Nancy Ridge Drive to Camino Santa Fe

- Carroll Canyon Road from Black Mountain Road to I-15*
- Hillery Drive from Black Mountain Road to Westview Parkway

Class IV Cycle Track (Two-Way Bikeway)

- Miramar Road from Commerce Avenue/Milch Road to I-15 (south side)
- Westview Parkway from Hillery Drive to Galvin Avenue (west side)
  Reagan Road/Marauder Way from New Salem Street to Mira Mesa Boulevard (east side/ north side)
- Carroll Canyon Road from Camino Santa Fe to Maya Linda Road (proposed extension) (south side)
- Maya Linda Road (proposed extension) from Carroll Canyon Road to Black Mountain Road (south side)

"" indicates segments where parking removal is anticipated prior to implementation of identified bicycle facility.*

Urban Pathways

A series of urban pathways have been identified in the Proposed Plan to support the vision for a vibrant and walkable employment and residential environment in Mira Mesa. These are wide, urban paths located parallel to the roadways along the focus area frontage, intended to create a stronger bicycle and pedestrian grid network.

These ancillary facilities will be constructed through the development process and are therefore located in the concentrated redevelopment areas of the Urban Villages and CPIOZ.

Bicycle Signal Phasing

Bicycle signal phasing is proposed to improve bicyclist safety, efficiency, and compliance at signalized intersections. Bike signal phasing is recommended at all intersections where Class IV bikeways intersect, which accounts for a majority of the signals in the community.

Protected Intersections

Protected intersections are recommended at certain intersections and provide safety benefits for cyclists at intersections and improve low stress connectivity through intersections within the community. One of the key features of a protected intersection is a raised corner island that reduces speeds of right turning vehicles, thereby improving visibility of pedestrians and bicyclists, and providing a physically separated space for a bicyclist to wait for a green light before proceeding through the intersection.

Protected intersection treatments could be implemented through the following mechanisms, as appropriate: repurposing existing public right-of-way (ROW), coordinating with abutting property owners, or having developers implement the adjacent improvement based on the supplemental development regulations and incentives outlined in Community Plan Implementation Overlay Zone (CPIOZ). At the project level when more information is available, modifications to improvements identified may be considered by the City. A list of potential locations are included below.

- Black Mountain Road at Activity Road
- Black Mountain Road at Kearny Villa Road/Carroll Centre Road
- Black Mountain Road at Maya Linda Road
- Black Mountain Road at Carroll Canyon Road
- Camino Ruiz at Carroll Canyon Road
- Camino Santa Fe at Calle Cristobal/Sorrento Valley Boulevard
- Camino Santa Fe at Mira Mesa Boulevard

- Camino Santa Fe at Carroll Canyon Road
- Mira Mesa Boulevard at Pacific Heights Boulevard

4.1.3 Transit Facilities

SANDAG 2021 Regional Plan

SANDAG's 2021 Regional Plan identifies transit improvements within the Mira Mesa community and surrounding area with the vision of 13% of commuters using transit by horizon year 2050. The following are planned transit projects identified in the 2021 Regional Plan to increase mobility connections for the Mira Mesa community and are included in the Proposed Plan:

- Extend existing Rapid 235 from Temecula from Downtown San Diego, running through Mira Mesa
- Double tracking for COASTER with peak frequencies of 20 minutes
- ***Rapid*** 30 Bus service from Old Town to Sorrento Mesa
- ***Rapid*** Route 688 bus service from San Ysidro to Sorrento Mesa via I-805/I-15/SR-52 during peak hours
- ***Rapid*** Route 690 from Mid-City to Sorrento Mesa via I-805 corridor during peak hours
- High frequency bus ***rapid*** route along Carroll Canyon Road
- Bus service frequency enhancements for routes 110, 237, and 921

Figure 4-3 displays the transit network under Proposed Plan conditions. It should be noted that the Mira Mesa Community Plan Update was developed prior to SANDAG publishing the 2021 Regional Plan. As a result, the only projects that were included in the model were the rapid bus services on Carroll Canyon Road and Mira Mesa Boulevard. The additional projects listed above from the Regional Plan are anticipated to further reduce VMT per employee by providing connectivity for the community to several parts of the region.

Sorrento Valley Transit Station Relocation

Relocation of the Sorrento Valley Station has been considered and recommended in previous planning efforts. The Project Report for *I-5/Sorrento Valley Road Interchange Improvements* recommends relocating the Sorrento Valley Station south, close to the interchange of Mira Mesa Boulevard and I-805. This would modify the transit connections to the community and would need to be evaluated for connections by all modes. The relocation provides an opportunity to explore first-mile and last-mile improvements for access to the Sorrento Valley employment center.

Sorrento Valley Skyway

The steep terrain characteristic of the canyons and valleys of Mira Mesa limit the feasibility of additional roadway connections in and out of Mira Mesa. Skyways, which are also referred to as aerial cableways, trams, or gondolas, offer a potential solution that can traverse natural obstacles while requiring a limited right-of-way. Connectivity between the Mira Mesa and University communities is very desirable as both areas have a strong focus on the biotech industry in the region. However, the I-805 freeway presents a major barrier for making this connection. SANDAG performed a feasibility study in 2017 for the Sorrento Valley Skyway connection between the Mid-Coast transit station in University City and the Sorrento Valley employment area in Mira Mesa. The Proposed Plan also proposes to extend the aerial skyway further into the heart of the community, to the Mira Mesa Town Center area near the Camino Ruiz and Mira Mesa Boulevard intersection.

Figure 4-3

LEGEND

- City and County Parks
- Focus Areas
- Schools
- Future Development

Planned Improvements

- New *Rapid* Transit*
- New Aerial Skyway Alignment / New Aerial Skyway Stop
- Mid-Coast Trolley Extension
- Commuter Rail
- Next Gen *Rapid*

*New *Rapid* Transit line to have a center-running guideway along Carroll Canyon Road

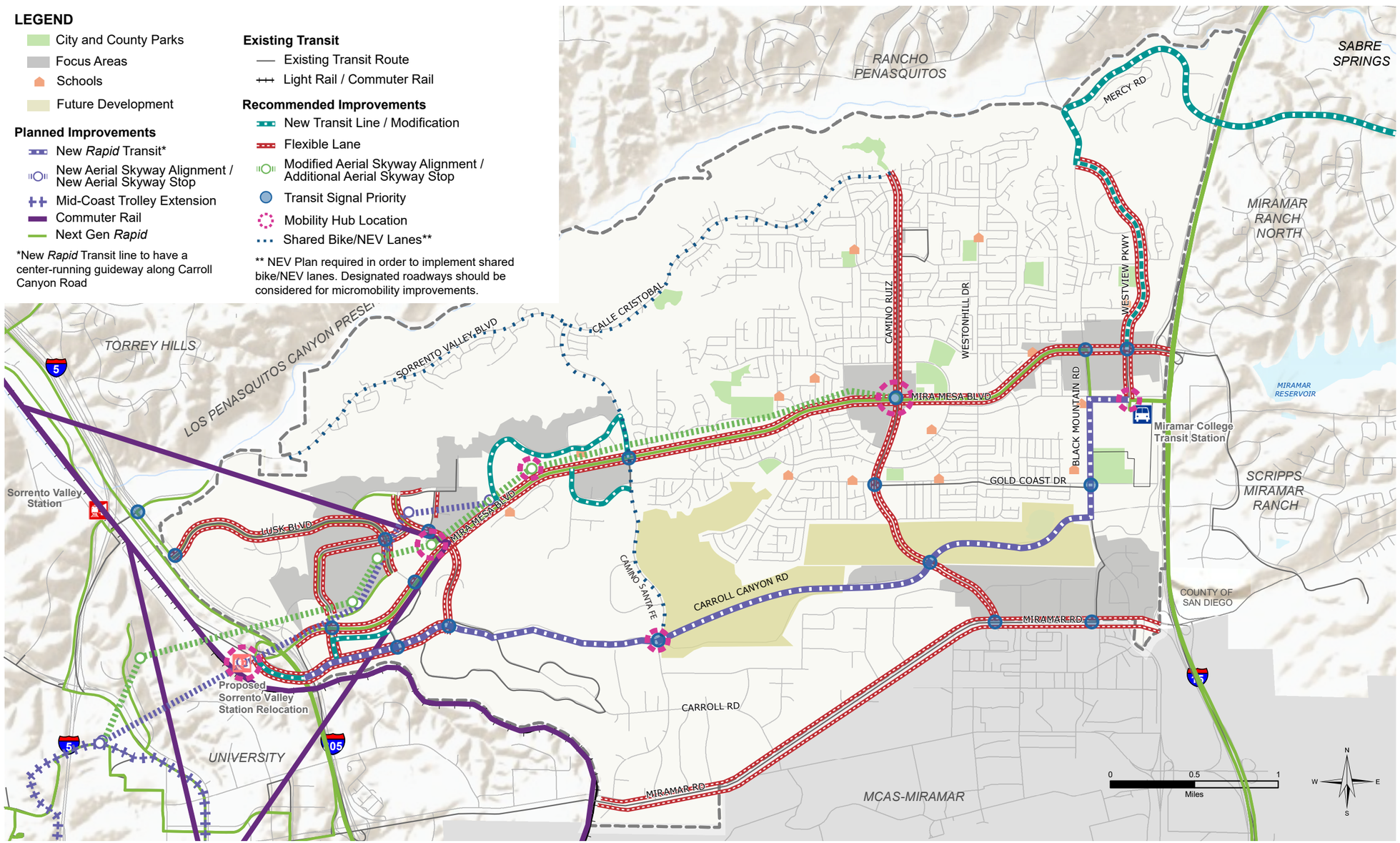
Existing Transit

- Existing Transit Route
- Light Rail / Commuter Rail

Recommended Improvements

- New Transit Line / Modification
- Flexible Lane
- Modified Aerial Skyway Alignment / Additional Aerial Skyway Stop
- Transit Signal Priority
- Mobility Hub Location
- Shared Bike/NEV Lanes**

** NEV Plan required in order to implement shared bike/NEV lanes. Designated roadways should be considered for micromobility improvements.



Transit Network – Proposed Plan Conditions

Kimley»Horn

SMART Corridors

The Mira Mesa CPU incorporates Sustainable Mobility for Adaptable and Reliable Transportation, (SMART) Corridors, that incorporate flexible lanes and emerging technology, such as transit signal priority and adaptive signal timing to increase person throughout. A SMART Corridor is a six-lane major arterial roadway that provides access to or between at least two freeways, whereby mobility improvements are planned for transit and other congestion reducing mobility forms through the repurposing of roadway space. This repurposing creates facilities with general purpose lanes plus flexible lanes, that may be used by a combination of non-single occupancy vehicles, connected/autonomous vehicles, or other emerging mobility concepts. The Proposed Plan includes three SMART corridors along Mira Mesa's major east-west roadways:

- Mira Mesa Boulevard
- Carroll Canyon Road
- Miramar Road

Flexible Lanes

Flexible lanes are proposed in the CPU and provide dedicated roadway space for any combination of non-single occupancy vehicles, including transit only lanes or high-occupancy vehicle lanes along the following corridors:

- Mira Mesa Boulevard
- Barnes Canyon Road / Scranton Road
- Carroll Canyon Road
- Pacific Heights Boulevard
- Lusk Boulevard

The remaining flexible lane corridors identified below could also be designated as transit-only lanes or high-occupancy vehicle lanes if transit connections are made available or more frequent along these corridors:

- Camino Ruiz
- Westview Parkway
- Miramar Road

Mobility Hubs

Mobility hubs are places where different travel options intersect. They provide an integrated suite of mobility services, amenities, and supporting technologies to better connect high-frequency transit to an individual's origin of destination. Several mobility hubs are included in the Proposed Plan at:

- Sorrento Valley Coaster Station (relocated)
- Mira Mesa Boulevard and Pacific Heights Boulevard
- Mira Mesa Boulevard and Genetic Center Drive
- Mira Mesa Boulevard and Camino Ruiz
- Carroll Canyon Road and Camino Santa Fe
- Miramar College Transit Center

Transit Signal Priority

The Proposed Plan includes transit priority measures along the following corridors:

- Mira Mesa Boulevard (SMART Corridor) between I-805 to I-15
- Carroll Canyon Road (SMART Corridor) (Center Running Bus Rapid Transit) from Camino Santa Fe to Black Mountain Road
- Miramar Road (SMART Corridor)
- Pacific Heights Boulevard
- Black Mountain Road
- Camino Ruiz
- Vista Sorrento Parkway
- Pacific Center Boulevard
- Pacific Mesa Boulevard

4.1.4 Roadway Facilities

Roadway improvements are predominately based on traffic volumes that are projected under buildout of the Proposed Plan and to accommodate the multimodal improvements identified in Sections 4.1.1 through 4.1.3.

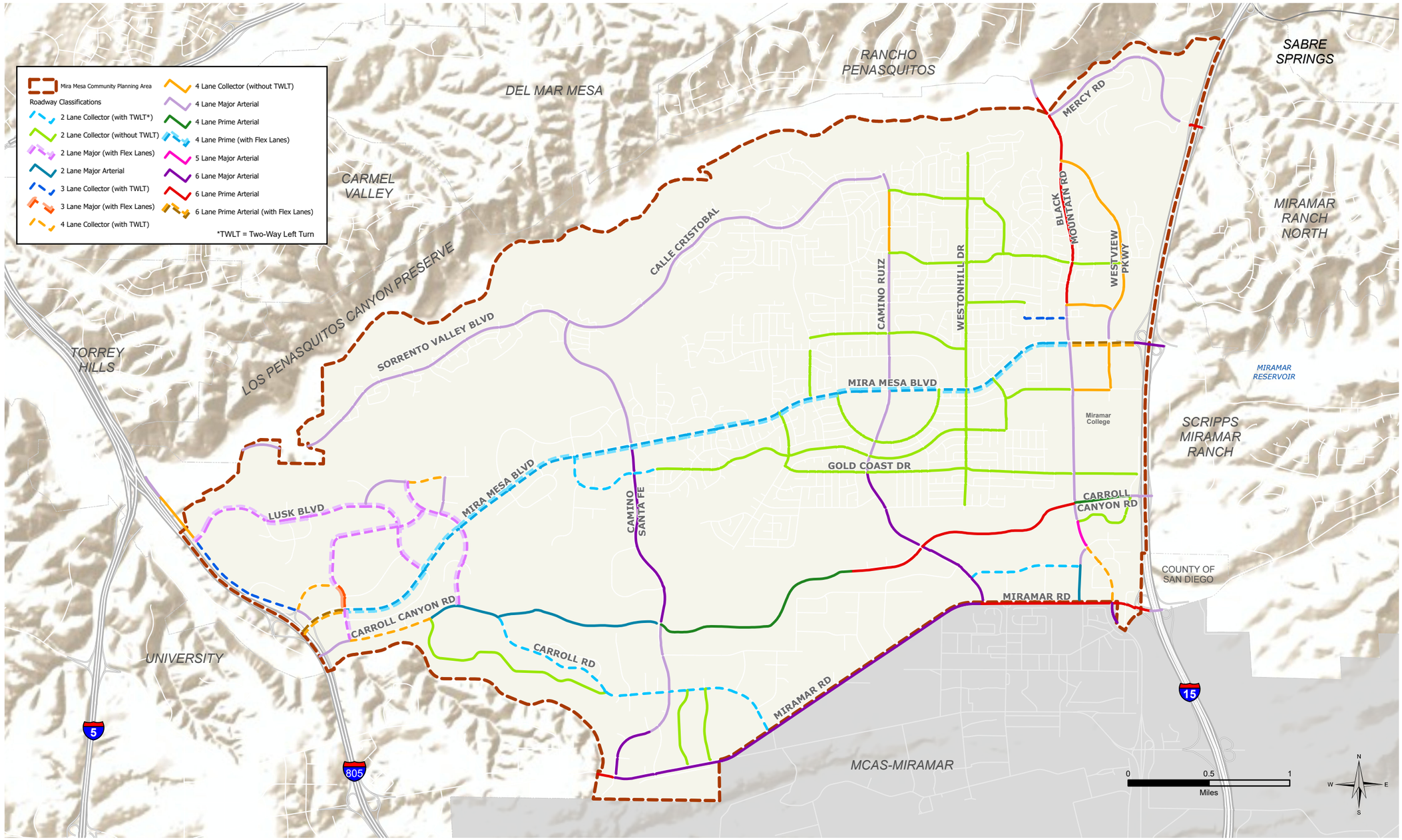
The Proposed Project incorporates "SMART" Corridors", to further SANDAG's 5 Big Moves strategy. SMART corridors would increase safety, capacity, and efficiency; provide dedicated space for efficient transit and other pooled services; manage demand in real-time; and maximize use of existing roadways. The lane configuration and type of use is contingent upon time of need.

The roadway facility network in the Proposed Project is shown in **Figure 4-4** and the identified roadway modifications are described in the following section.

Roadway Classification Modifications

The construction and extension of Carroll Canyon Road spanning from I-805 to I-15 as an additional east-west roadway will help alleviate some of the congestion currently experienced along Mira Mesa Boulevard and some of the more residential east-west roadways such as Gold Coast Drive and Flanders Drive. Carroll Canyon Road will provide another major east-west roadway that will connect new housing to employment and parks.

Figure 4-4



Roadway Classifications – Proposed Plan Conditions

Kimley»Horn

Intersection Modifications

Several intersections are proposed to be modified to accommodate buildout of the roadway segment and bicycle classifications, as well as to support the pedestrian treatments associated with the pedestrian route typologies. Improvements are aimed at enhancing operation and safety for all travel modes. These intersection improvements can include, but are not limited to, restriping, lane reconfiguration, new intersection legs, signal modifications, new signals, and other modifications to accommodate the Proposed Project's active transportation facilities, transit corridors, and the SMART corridors. In addition to the listings of intersections recommended for LPIs and bicycle signal phasing in the previous sections, Error! Reference source not found. lists the intersections with proposed improvements to accommodate buildout of the roadway segment classifications. Details of those improvements are provided in ***Chapter 3*** of the *MTR*.

The Miramar Road and Kearny Mesa Road intersection is recommended to be modified to include the following improvements:

- Cul-de-sac the south leg of Kearny Mesa Road so that it no longer intersects with Miramar Road. Vehicles will have to access Miramar Road via Kearny Villa Road
- Restrict access on the north leg of Kearny Mesa Road to right-in/right-out only
- Remove the traffic signal control at the intersection

4.2 Issue 2: Hazardous Design Features

Would the Proposed Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Proposed Project proposes repurposing the roadways to accommodate all modes of transportation, which would alter the existing street geometry of some roadways in the CPU area. The design of roadways in the CPU area would be required to conform with applicable Federal, State, and City of San Diego's design criteria which contain provisions to minimize roadway hazards. Compliance with these standards and designed to the satisfaction of the City of San Diego's City Engineer would avoid impacts related to roadway hazards due to design features or incompatible uses. Furthermore, the Proposed Project would improve existing transportation deficiencies by providing higher quality bicycle facilities and improving pedestrian connectivity by eliminating gaps in the pedestrian network. These multi-modal enhancements are intended to improve safety for all users of the roadway. Therefore, impacts related to hazardous design features would be less than significant.

4.3 Issue 3: Vehicle Miles Traveled – SB 743 Analysis

Would the Proposed Project result in vehicle miles traveled (VMT) exceeding thresholds for City of San Diego's compliance with SB 743 legislation?

On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law and started a process intended to fundamentally change transportation impact analysis as part of the California Environmental Quality Act (CEQA) compliance. The Office of Planning and Research (OPR) published its latest recommended Technical Advisory on Evaluating Transportation Impact in CEQA in December 2018. This Technical Advisory provides recommendation on how to evaluate transportation impacts under SB 743. The OPR guidance covers specific changes to the CEQA guidelines and recommends elimination of auto delay for CEQA purposes and the use of Vehicle Miles Traveled, or VMT, as the preferred CEQA transportation metric.

VMT is positively correlated with growth and as the region is expected to grow, VMT is also expected to increase. How and where growth occurs plays a significant role in determining how much VMT will increase. Growth areas are projected to be more VMT efficient with the following: high quality transit such as Transit Priority Areas (TPAs)[1], a complete active transportation network, and complementary land use mixes.

In their Technical Advisory on Evaluating Transportation Impacts on CEQA (December 2018), OPR recommends the use of VMT metrics when analyzing land use projects and plans:

- For residential uses, the recommended efficiency metric is Resident VMT per Capita;
- For employment uses, the recommended efficiency metric is Employee VMT per Employee.
- For retail uses, the recommended metric is a net change of total area (i.e., Mira Mesa) VMT due to the nature of retail trips typically redistributing shopping trips rather than creating new trips.

Consistent with the OPR Technical Advisory, the significance thresholds are shown in **Table 3-1**.

As described in ***Chapter 3***, SANDAG's Activity Based Model (ABM) was used to calculate the Proposed Project's VMT. The proposed land uses and mobility network were inputs to the model to develop future roadway forecasts and VMT. It should be noted that the recommended bicycle network was not coded into the ABM. It was determined that the bicycle network would result in a mode shift from vehicle to bicycles of 5%. As such, the VMT obtained from the ABM was reduced by 5%. The technical memorandum describing the post-processing is contained in **Appendix E.**

Table 4-1 presents the Mira Mesa resident and employee VMT efficiency metrics for Base Year conditions. For Mira Mesa, under Base Year conditions, the community is above the regional 85 percent threshold (i.e., exceeding 15 percent below the Base Year average) for both efficiency metrics at 93.6 percent and 120.2 percent of the Base Year regional averages for both average Resident VMT per Capita and average Employee VMT per Employee, respectively.

Table 4-1: Mira Mesa Base Year VMT Metrics for Transportation Impact Analysis

VMT Metric1	Base Year (2012)			% of Regional Base Year (average)	
	Region	City	Mira Mesa	City	Mira Mesa
Resident VMT/Capita	17.3	15.2	16.2	87.9%	93.6%
Employee VMT/Employee	25.2	24.9	30.3	98.8%	120.2%

Note:
[1] Mira Mesa Base Year VMT efficiency metrics were obtained from the SANDAG's Vehicle Miles of Travel Report specific to the Mira Mesa modeling scenario. Data is provided in Appendix B.

By 2050 with the implementation of the Proposed Project, the VMT efficiency of Mira Mesa substantially improves. **Table 4-2** presents the Mira Mesa resident and employee VMT for the Proposed Project. Mira Mesa is projected to have a Resident VMT per Capita at 10.7 and an Employee VMT per Employee at 23.3, which are 62.1 percent and 92.4 percent, respectively, of the Base Year regional averages. VMT associated with the residential land uses would not exceed the 85 percent thresholds at buildout of the Proposed Project and would be less than significant. However, the employment land use would exceed the 85 percent threshold and would be significant.

It should be noted that the Mira Mesa Community Plan Update was developed prior to SANDAG publishing

[1] Transit Priority Areas, within the context of Mira Mesa, include areas within one-half mile of existing or planned trolley stations or the intersection of two or more major bus routes, each having a frequency of service of 15 minutes or less during the morning and afternoon peak commute periods.

the 2021 Regional Plan. Projects identified in the Regional Plan are anticipated to reduce VMT per employee due to major transit infrastructure investments that will provide connectivity for the community to several parts of the region.

Table 4-2: Mira Mesa Proposed Project VMT Efficiency Metrics for Transportation Impact Analysis of Residential and Employment Uses

VMT Metric[1]	Base Year	2050 Proposed Project			% of Regional Base Year		Significant Impact?
	Region	Region	City	Mira Mesa	City	Mira Mesa	Mira Mesa
Resident	17.3	14.7	12.5	10.7	72.3%	61.8%	NO
Employee	25.2	21.9	20.7	23.3	82.1%	92.5%	YES

Note:

[1] Mira Mesa Base Year and Proposed Project VMT efficiency metrics were obtained from the SANDAG's Vehicle Miles of Travel Report specific to the Mira Mesa modeling scenarios. Data is provided in Appendix B.

Between the Base Year to buildout of the Proposed Project, Mira Mesa's commercial retail square footage would increase by 19% (5,664,348 sf to 6,757,275 sf). With this increase in the commercial retail square footage the Mira Mesa Total VMT generated by all commercial uses is expected to increase under the Proposed Project. With the Proposed Project, it is anticipated that further redevelopment would maintain and possibly expand neighborhood and community-serving retail. The potential increase in VMT is not related to regional-serving retail, rather local-serving retail is proposed, which would result in shorter trips that originate and end within the community. Per OPR's Technical Advisory "local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than significant transportation impact." Therefore, impacts related to VMT for retail land uses would be less than significant.

4.1 Issue 4: Emergency Access

Would the Proposed Project result in inadequate emergency access?

Emergency access requirements are established in the City's Fire Code. The Mira Mesa Community is located in an established, developed urbanized area with ample access for emergency service providers. Future development under the proposed CPU would likely require encroachment upon adjacent roadways, for typical construction activities such as frontage improvements, utility connections, and roadway/mobility improvements. Such activities would temporarily affect localized circulation patterns in the CPU area. A Traffic Control Plan/Permit would be implemented on a project-by-project basis for any lane closures in the public right-of-way or driveway closures that would impact adopted emergency access or response plans. The contractor would follow standard construction practices and ensure adequate on-site circulation and access is always maintained for all users, including emergency service providers.

Site design of future development would be subject to the emergency access requirements of the City's Fire Code and review by the San Diego Fire-Rescue Department to ensure adequate emergency access during operation of any given project. Additionally, the proposed CPU aims to improve circulation and mobility throughout the CPU area. This includes the development and implementation of a comprehensive Intelligent Transportation System, which would improve management of the local transportation system, including incident and emergency response.

Therefore, the project would not create significant impediments for emergency access, and impacts would be less than significant.

4.2 Significance of Impacts

Conflicts with Current Plans/Policies

Pedestrian Facilities

The Proposed Project would not restrict or impede pedestrian connectivity, would not conflict with any adopted policies or plans addressing pedestrian facilities, and would result in less than significant impacts.

The Proposed Project would be consistent with and would implement the General Plan's safety and accessibility, connectivity, and walkability policies. Pedestrian-focused policies contained in the proposed include enhancements to pedestrian travel within the CPU area, such as implementing the multi-use urban pathway system, constructing sidewalk and intersection improvements, and installing missing sidewalks and curb ramps[2]. The Proposed Project would include planned pedestrian improvements to install curb ramps, sidewalks, and audible pedestrian signals to meet ADA standards. Implementation of the Proposed Project would not restrict or impede pedestrian connectivity and would not conflict with any adopted policies or plans addressing pedestrian facilities. Thus, impacts would be less than significant.

Bicycle Facilities

The Proposed Project would not restrict or impede bicycle connectivity, would not conflict with any adopted policies or plans addressing bicycle facilities, and would result in less than significant impacts.

The Proposed Project includes facilities that build on those identified in the Regional Bike Plan and City of San Diego Bicycle Master Plan, while also identifying new recommendations and improving upon existing facilities through an emphasis on protected facilities such as multi-use paths and cycle tracks. Bicycle-focused policies contained in the proposed CPU are consistent with current Regional and City plans that include providing and supporting a continuous network of safe, convenient, and attractive bicycle facilities throughout the community, and enhancing safety, comfort, and accessibility for all levels of bicycle riders[3]. The Proposed Project supports improvements such as wayfinding marking, bicycle signals, buffered bicycle lanes, and protected bicycle facilities. Implementation of the Proposed Project would not restrict or impede bicycle connectivity and would not conflict with any adopted policies or plans addressing bicycle facilities. Thus, impacts would be less than significant.

Transit Facilities

The Proposed Project would not interfere with implementation of planned transit improvements and would provide policy support for their implementation and would result in less than significant impacts.

The General Plan includes policies for supporting the provision of higher-frequency transit services and implementing transit priority measures to help bypass congested areas. Transit-focused policies contained in the proposed CPU support implementation of the transit improvements identified in the Regional Plan by prioritizing the transit system and improving efficiency of transit services[4]. The Proposed Project includes implementation of transit priority signals on key transit corridors and right-of-way specifically for high-quality transit facilities. In addition, the Proposed Project provides for a complete bicycle and pedestrian network connecting with and improving access to transit. Thus, implementation of the Proposed Project would not interfere with implementation of planned transit improvements and would facilitate their implementation. Impacts related to conflicts with plans or policies addressing existing or planned transit facilities. Thus, impacts would be less than significant.

[2] See Policies for Mobility MO-4.6 through MO-4.11, MO-4.12, MO-4.15, MO-4.18, and MO-4.20.
[3] See Policies for Mobility MO-4.6, MO-4.12 through MO-4.20.
[4] See Policies for Mobility MO-4.1 through MO-4.5, and MO-4.23.

Roadway Facilities

The Proposed Project would not conflict with any adopted policies or plans addressing roadway facilities and would result in less than significant impacts.

The Proposed Project would support goals and policies included in the General Plan, which is to provide a balanced, multi-modal transportation network where each travel mode can contribute to an efficient network of services meeting varied user needs. The General Plan advocates for interconnected street networks within and between community, and the Proposed Project would support this effort by creating a walkable and bicycle-friendly environment and supporting transit as a primary mode of travel for many users. Roadway improvements includes, but not limited to, new roadway connections (Carroll Canyon Road) and widening of roadways, repurposing vehicle travel lanes to provide protected bicycle facilities and flexible lanes for SMART corridors, signal operational improvements for corridor management, reserving right-of-way to implement multi-use paths, and providing bicycle and pedestrian signal enhancements to improve safety. Implementation of the Proposed Project would not conflict with any adopted policies or plans addressing roadway facilities. Thus, impacts would be less than significant.

Hazardous Design Features

The design of roadways under the Proposed Project would conform to applicable standards to minimize roadway hazards and would result in less than significant impacts.

The design of roadways in the CPU area would be required to conform with applicable Federal, State and City of San Diego's design criteria which contain provisions to minimize roadway hazards. Compliance with these standards and designed to the satisfaction of the City of San Diego's City Engineer would avoid roadway hazards. Impacts would be less than significant.

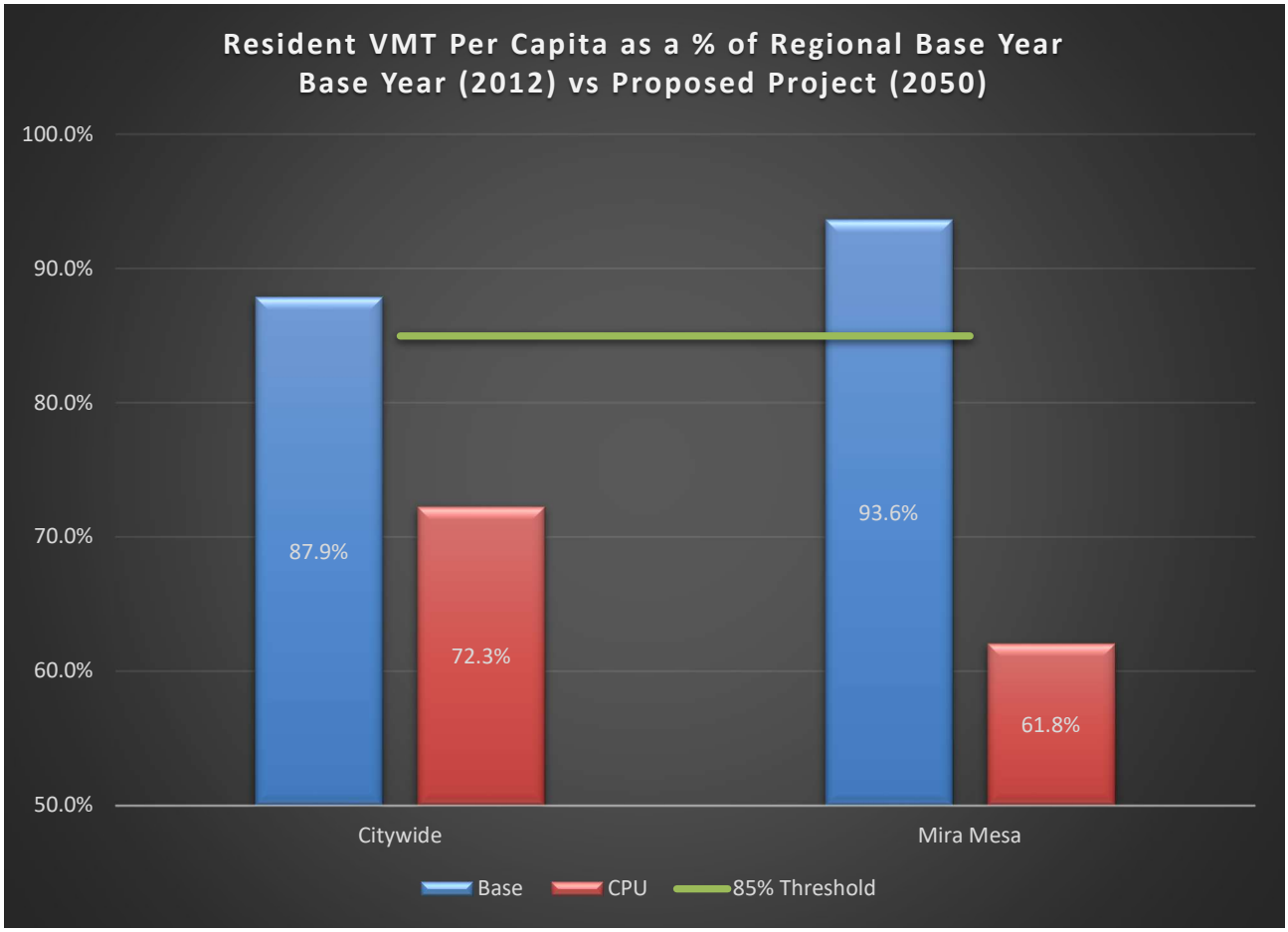
Vehicle Miles Traveled per Capita – SB 743 Analysis

Residential Land Uses

The Proposed Project would not result in a significant impact for its residential land uses.

The Proposed Project would not create a significant impact for residential land uses as the VMT would be under the 85 percent threshold (i.e., 15 percent below the Base Year regional average) for this efficiency metric. **Figure 4-5** displays the citywide and Mira Mesa Resident VMT per Capita as a percentage of the Base Year's regional average Resident VMT per Capita. As shown, with the Proposed Project, the average Resident VMT per Capita for Mira Mesa is lower than the 85 percent threshold. Furthermore, the citywide average Resident VMT per Capita is also below the 85 percent threshold under the Proposed Project. Mira Mesa's Resident VMT per Capita for the Proposed Project is 61.8 percent of the Base Year regional average, and therefore, the transportation impacts related to residential uses are considered less than significant.

Figure 4-5: Resident VMT Per Capita Employment Land Uses

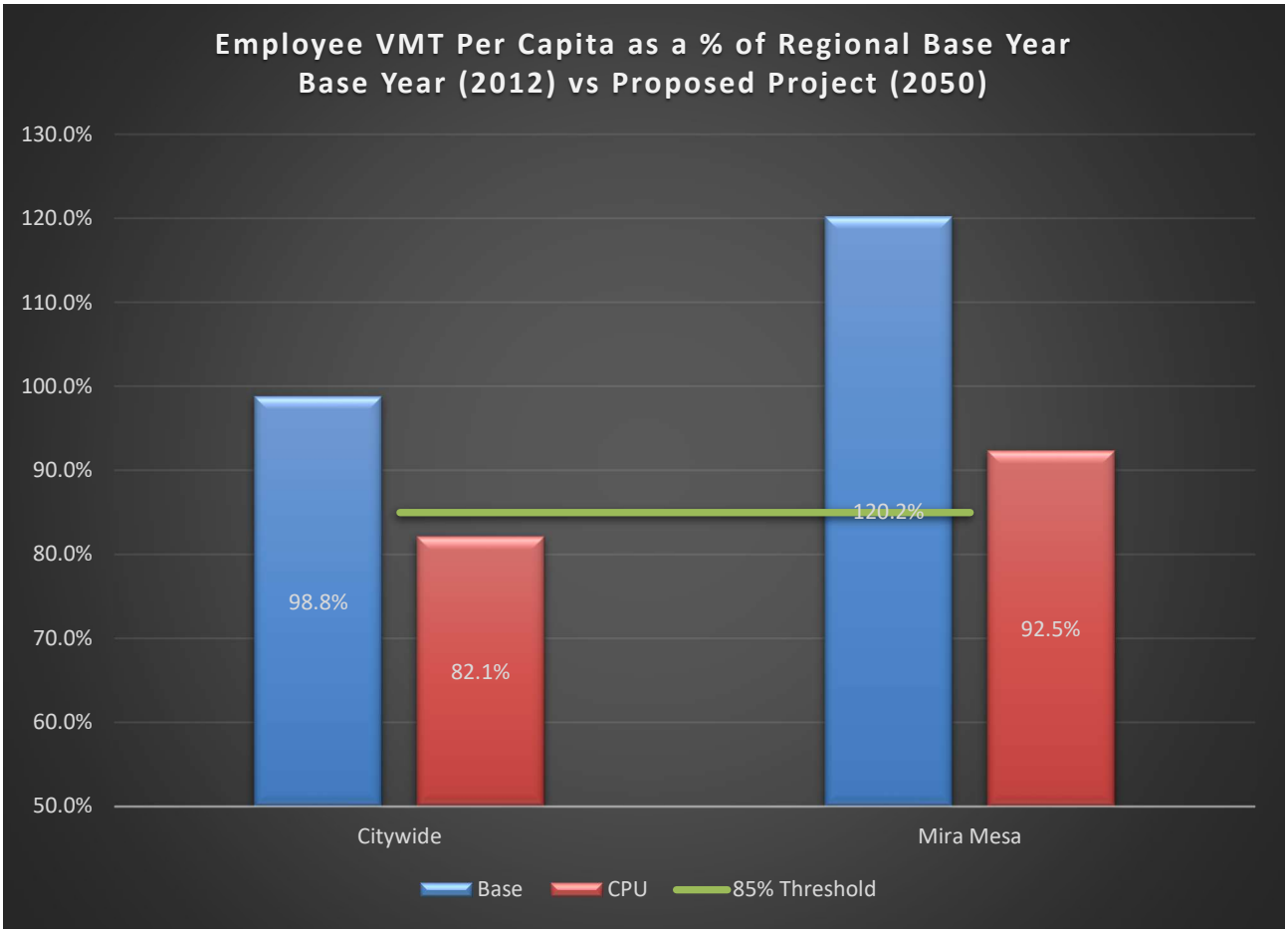


Employment Land Uses

The Proposed Project would result in a significant impact for its employment land uses.

The Proposed Project would create a significant impact for employment land uses as the VMT would be above the 85 percent threshold (i.e., 15 percent below the Base Year regional average) for this efficiency metric. **Figure 4-6** displays the citywide and Mira Mesa Employee VMT per Employee as a percentage of Base Year's regional average for Employee VMT per Employee. As shown, with the Proposed Project, the average Employee VMT per Employee for Mira Mesa is greater than the 85 percent threshold. However, the citywide average Employee VMT per Employee is below the 85 percent threshold under the Proposed Project. Mira Mesa's Employee VMT per Employee for the Proposed Project is 92.5 percent of the Base Year regional average, and therefore, the transportation impacts related to employment uses are considered significant.

Figure 4-6: Employee VMT Per Employee



Overall, Mira Mesa CPU's lower residential and employment related VMT compared to the Base Year is largely because the Proposed Project was designed to self-mitigate by increasing the transportation efficiency in the community guided by the General Plan and Climate Action Plan which also align with Statewide goals. The Proposed Project is also consistent with the City of San Diego's Complete Communities initiative, which includes planning strategies that work together to create incentives to build homes near transit, provide more mobility choices, enhance opportunities for places to walk, bike, relax and play, and more quickly bring neighborhood benefits where needed the most[5]. As a result, the Proposed Project improves not only the community's VMT efficiencies, but also the citywide VMT efficiencies for the Resident VMT per Capita and the Employee VMT per Employee.

Retail Land Uses

According to OPR's recommendations, a retail impact is considered significant when there is a net increase in total area (i.e., Mira Mesa) VMT related to the new retail and commercial uses that could be developed with the adoption of the proposed CPU. Mira Mesa Total Retail VMT is anticipated to increase with the buildout of the Proposed Project when compared to the present condition due to the higher-density redevelopment that could occur in the eight Urban Village areas where future retail is anticipated to serve nearby residences and places of employment. With the Proposed Project, it is anticipated that further redevelopment would maintain and possibly expand neighborhood and community-serving retail. The potential increase in VMT is not related to regional-serving retail, rather local-serving retail is proposed, which would result in shorter trips that originate and end within the community. Per OPR's Technical

[5] City of San Diego's Complete Communities Initiative (https://www.completecommunitiessd.org/)

Advisory "local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than significant transportation impact." Furthermore, when evaluating Employee and Resident (per capita) VMT, both account for the employee and resident tour VMT. Tour VMT includes trips made by employees and residents within the community to retail uses in addition to all other trips they make on a daily basis. At a programmatic level without site specific details regarding retail uses, it is anticipated that retail uses complying with the Proposed Project would be community serving. Therefore, retail VMT has already been accounted for and consistent with OPR's guidance and retail VMT impacts would be less than significant.

Emergency Access

A Traffic Control Plan/Permit would be implemented on a future project-by-project basis for any lane closures in the public right-of-way or driveway closures, which would ensure access at all times, including emergency service providers. Site design of future development would be subject to emergency access requirements of the City's Fire Code and review by the San Diego Fire-Rescue Department to ensure adequate emergency access during operation of any given project. Additionally, the proposed CPU aims to improve circulation and mobility throughout the CPU area. This includes the development and implementation of a comprehensive Intelligent Transportation System, which would improve management of the local transportation system, including incident and emergency response. Therefore, the project would not create significant impediments for emergency access, and impacts would be less than significant.

Mitigation Measures

VMT is positively correlated with growth and as the region is expected to grow, VMT is also expected to increase. However, where the growth occurs plays a significant role in determining how much VMT will increase. Growth in areas with access to high-quality transit such as Transit Priority Areas (TPAs), a complete active transportation network, and complementary land uses mixes are more VMT efficient.

Guided by the City's General Plan and Climate Action Plan, SANDAG's Regional Plan, as well as state of the practice urban planning principles (i.e., such as Transit Oriented Development and Complete Streets), the Proposed Project land uses focus growth along transit corridors and providing a complementary mix of uses. With a fully connected active transportation network, this mix of uses in the locations proposed are planned for the purpose of eliminating and reducing vehicular trips, thereby results in reduced VMT. The key theme behind the Proposed Project is the connected community[6]. The Proposed Project envisions this community as a sub-regional employment center adaptable to future employment trends and technologies that would bring in a diversified workforce. New development would be focused in mixed-use villages, that would introduce new residential, retail and employment opportunities consolidated around transit corridors with a supportive and balanced mobility system to serve the needs of all current and future users. This system would provide an active transportation network that would be a viable and enjoyable option for traveling within the community in addition to providing connections to transit to get to and from destinations around the region. By bringing in varied and complementary uses in transit corridors and a mobility network that supports and encourages alternative mode choice, the Proposed Project plans a more VMT efficient and sustainable future for the community.

Residential Land Uses

As shown in **Table4-1** and **Figure 4-5**, the Proposed Project's impact for its proposed residential land uses would be less than significant, therefore, no mitigation measures are required.

[6] Mentioned in Section 5: Urban Design of the Mira Mesa Community Plan, March 2020 version.

Employment Land Uses

As shown in **Table 4-1**and **Figure 4-6**, the Proposed Project's impact for its proposed employment land uses would be significant; therefore, mitigation measures are required.

For the employment land uses, the Proposed Project would result in a potentially significant impact by exceeding the threshold for VMT per employee. As previously mentioned, the Proposed Project identified active transportation connections to these employment areas, providing an opportunity for VMT to be reduced as more employees choose to commute by walking, scooting and/or biking. Overall, the proposed CPU is a planning document intended to guide future development throughout Mira Mesa. It provides detailed policies and implementation guidance that would be applicable to many specific details of future development as applications are filed and future implementing actions are considered. Due to the programmatic nature of the proposed CPU, it does not propose any specific development projects, and thus, cannot adequately anticipate specific project-level requirements at this time. To mitigate the potential impact to less than significant, future development under this proposed CPU would need to be mitigated on a project basis. This could be accomplished through the Citywide Mobility Choices Ordinance, which requires development projects to reduce their VMT to the extent feasible by providing on-site VMT-reducing infrastructure such as those found in the California Air Pollution Control Officers Association, and the SANDAG Mobility Management Toolbox, or pay a fee that would fund active transportation infrastructure in VMT efficient areas to reduce Citywide VMT. In addition to the City's Mobility Choices ordinance, the City of San Diego is looking to amend the Land Development Code to include mandatory transportation demand management (TDM) regulations. TDM are strategies and programs aimed to reduce VMT by facilitating and encouraging the use of alternative modes of transportation.

MM-TR-1 The City of San Diego shall adopt an amendment to the Land Development Code to include mandatory transportation demand management (TDM) regulations that would require future development projects within the City of San Diego to provide on-site VMT- reducing infrastructure/strategies/services to reduce VMT resulting from employee trips.

However, because this action by a decision-making body cannot be ensured to occur, and analysis of the implementation of such an ordinance has not been included in the Programmatic Environmental Impact Report (PEIR). This mitigation while potentially feasible, is not implementable at this time. Therefore, this VMT impact is significant and unavoidable.

Retail Land Uses

For the Proposed Project's retail land uses, impacts due to existing and planned retail and commercial uses would be less than significant due to the locally serving nature of the Proposed Project (retail uses).

4.3 Level of Significance After Mitigation

Should MM-TR-1 be adopted by City Council, and implemented, VMT would be reduced by individual projects that maybe permitted and constructed under the proposed CPU. A citywide TDM ordinance could reduce community and citywide VMT for projects both ministerial and discretionary, thereby mitigating the potential impact identified in the previous section. The effectiveness of the VMT reducing program included in such an ordinance would need to be context sensitive and would vary depending on the individual project site such as the location, access to transit, etc and strategies that the individual project would provide. For this reason, and because it is uncertain if, or when such regulations would become effective, MM-TR-1 would not fully mitigate the VMT impact for employment land uses. However, through continued updates to community plans in transit priority areas, further reductions in citywide VMT would potentially occur. Thus, transportation impacts due to the Proposed Project's employee land uses would remain significant and unavoidable.

5.0 VEHICLE MILES TRAVELED FOR GHG ANALYSIS PURPOSES

To more accurately describe the vehicle miles traveled (VMT) attributable to a smaller geography, such as a community planning area, it is necessary to track the trips and distances to and from the community that goes beyond the boundary of the geography. The ABM has this capability by designating the Mira Mesa community as a select zone. By selecting Mira Mesa as a select zone, any vehicle-based trip that has an origin, destination, or both in the community are tracked and all of the VMT of these trips are aggregated as the select zone VMT for Mira Mesa. Appendix A further describes this analytical approach and resulting VMT, which can further be applied to a calculation of transportation emissions.

The select zone VMT includes all the VMT from any trip that originates or ends in that select zone. However, for External-to-Internal (E-I)[7] or Internal-to-External (I-E)[8] trips that only have one trip end in the select zone, it is not entirely accurate to attribute that entire trip length to the community as it originated or ended elsewhere, whereas all of the Internal-to-Internal (I-I)[9] trip lengths are included in select zone. The International Council for Local Environment Initiatives (ICLEI) method was developed to appropriately calculate the VMT attributable to the community for GHG purposes. Essentially the equation is as follows:

ICLEI VMT = 100% (I-I VMT) + 50% (E-I, I-E VMT)

Table 5-1 presents the VMT for greenhouse gas (GHG) emissions analysis using the ICLEI method for the Mira Mesa community. As shown, the Proposed Project scenario's VMT is greater than the Base Year Plan scenario. Specifically, the Proposed Project's VMT would be approximately 58% greater than the Base Year. This is a result of the increased residential and employment land uses.

Table 5-1: Vehicle Miles Traveled for GHG Analysis

Mira Mesa	2012 Base Year	2050 Proposed Project	% Change
MM VMT for GHG (ICLEI)[1]	695,976	1,099,020	57.9%

Note:

[1] Mira Mesa's VMT for GHG analysis was calculated using the information provided through the disaggregated VMT for Mira Mesa Select Zone model output from SANDAG, which is provided in Appendix C.

[7] Trips that originate outside of the Community and end within the community.
[8] Trips that originate within the Community and end outside of the Community.
[9] Trips that both the origin and destination are within the Community limits.

5.1 Vehicle Miles Traveled for GHG Analysis per Service Population

VMT per service population is an informative metric to understand the growth in VMT in relation to community growth. **Table 5-2** summarizes the population, employment, and service population for the Mira Mesa community for the Base Year and Proposed Project scenarios.

Table 5-2: Mira Mesa Population and Employment

Mira Mesa	2012 Base Year	2050 Proposed Project	% Change
Dwelling Units	24,949	58,741	135.4%
Residents[1]	71,989	167,428	132.6%
Employees[1]	72,552	95,945	32.2%
Service Population[2]	144,541	263,373	82.2%

Note:

[1] Residents and employment values taken from model output provided in the Vehicle Miles of Travel Reports provided in Appendix B. Slight variations than existing and proposed employment numbers due to model synthesis.

[2] Service population is the sum of residents and employees within Mira Mesa.

In the Proposed Project scenario, the number of residents would increase by 132.6% (71,989 to 167,428). The service population of Mira Mesa is the sum of residents and employees within Mira Mesa. **Table 5-3** presents the VMT via the ICLEI method per service population for Mira Mesa using the projected service populations for each scenario.

Table 5-3: Mira Mesa Vehicle Miles Traveled for GHG Analysis Per Service Population

Mira Mesa	2012 Base Year	2050 Proposed Project	% Change
ICLEI VMT per Service Population	4.82	4.17	-13.3%

The Proposed Project scenario shows a 13.3% decrease in VMT per Service Population when compared to the Base Year scenario. As described in the previous chapter, the reduction in VMT per Service Population is due to the more balanced land use network and the comprehensive multi-modal mobility network.

6.0 ALTERNATIVES ANALYSIS

The California Environmental Quality Act (CEQA) mandates consideration and analysis of alternatives to the Proposed Project. According to CEQA Guidelines, the range of alternatives "shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant impacts" (CEQA Guidelines Section 15126.6 (d) (2)). The discussion must also include an evaluation of the No Project Alternative to allow decision-makers to compare the impacts of approving the Proposed Project against the impacts of not approving it.

The alternatives discussion need not be exhaustive and are subject to a construction of reasonableness. The impacts of the alternatives may be discussed "in less detail than the significant effects of the project proposed" (CEQA Guidelines Section 15126.6 (d)). Additionally, the CEQA Guidelines generally permit analysis of alternatives at a less detailed level for general plans and other program EIRs than what is required for project EIRs. The CEQA Guidelines do not specify what constitutes an adequate level of detail, though an EIR must provide sufficient information to allow meaningful evaluation, analysis, and comparison of each alternative. The CEQA Guidelines require that this analysis identify the environmentally superior alternative among those analyzed.

This chapter discusses the vehicle miles traveled (VMT) under the project alternatives, including the Adopted Plan and the Medium-Density Alternative. The mobility network for the Medium-Density Alternative is the same as the Proposed Project. The No Project Alternative includes a different mobility network and land use plan than the Proposed Project. The Vehicle Miles of Travel Reports (SB 743 metrics for residential and employment) for all project alternatives are included in Appendix D.

6.1 No Project Alternative (Adopted Plan)

The purpose of evaluating the No Project Alternative is to allow decision makers to compare the potential impacts of approving the Proposed Project with the potential impacts of not approving the Proposed Project. The No Project Alternative represents what would reasonably be expected to occur in the foreseeable future if the Proposed Project were not approved. The No Project Alternative would consist of the Adopted Community Plan's land use designations and proposed mobility network as they apply today, including all amendments to the Community Plan from its original adoption in 1992 to the most recent amendment in 2021. The majority of Mira Mesa is designated for residential, industrial, and commercial uses. Table 2-1 summarizes buildout under the No Project Alternative (Adopted Plan) compared to the Base Year and Proposed Project.

Table 6-1 presents the Mira Mesa average resident and employee VMT for the Adopted Plan. As shown in the table, Mira Mesa is projected to have an average Resident VMT per Capita at 12.6 and an average Employee VMT per Employee at 25.9 under the Adopted Plan, which is 73.0% and 102.9%, respectively, of the 2012 regional averages for these efficiency metrics.

Table 6-1: Mira Mesa Adopted Plan VMT Efficiency Metrics for Transportation Impact Analysis of Residential and Employment Uses

VMT Metric	Base Year (2012)	2050 Proposed Project			2050 Adopted Plan		
	VMT Region	VMT	% of Regional Base Year Mira Mesa	SI?	VMT	% of Regional Base Year Mira Mesa	SI?
Resident VMT/Capita	17.3	10.7	61.8%	NO	12.6	72.8%	NO
Employee VMT/Employee	25.2	23.3	92.5%	YES	25.9	102.8%	YES

Between the Base Year to buildout of the Adopted Plan, Mira Mesa's commercial retail square footage would increase by 9% (5,664,348 sf to 6,196,576 sf). With this increase in the commercial retail square footage the Mira Mesa Total VMT generated by all commercial uses is expected to increase under the Adopted Plan. With the Adopted Plan, it is anticipated that further redevelopment would maintain and possibly expand neighborhood and community-serving retail. The potential increase in VMT is not related to regional-serving retail, rather local-serving retail is proposed, which would result in shorter trips that originate and end within the community. Per OPR's Technical Advisory "local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than significant transportation impact." Therefore, impacts related to VMT for retail land uses would be less than significant.

Significance of Impacts

Residential Land Uses

The Adopted Plan would not result in a significant impact for its residential land uses.

As shown in **Table 6-1**, the Adopted Plan would not result in a significant impact for its residential land uses as the VMT is under than the 85% threshold (i.e., 15% below the Base Year regional average). Mira Mesa's Resident VMT per Capita for the Adopted Plan is 72.8% of the Base Year regional average, and therefore, the transportation impacts related to residential uses are considered less than significant. When compared to the Proposed Project, the Adopted Plan's VMT would be higher for its residential land uses.

Employment Land Uses

The Adopted Plan would result in a significant impact for its employment land uses.

As shown in **Table 6-1**, the Adopted Plan would result in a significant impact for its employment land uses as the VMT is greater the 85% threshold. Due to the large increase in office space and continued housing imbalance under the Adopted Plan conditions compared to Base Year conditions, Mira Mesa's Employee VMT per Employee for the Adopted Plan is 102.8% of the Base Year regional average, and therefore, the employee uses are considered to have a significant transportation impact. When compared to the Proposed Project, the Adopted Plan's VMT would be higher for its employment land uses.

Retail Land Uses

The Adopted Plan would result in a less significant impact for its retail land uses.

New retail development under the Adopted Plan scenario would typically redistribute shopping trips rather than create new trips. Although there is an increase to retail land uses under the Adopted Plan scenario, the retail uses are anticipated to be locally serving and under OPR's guidance are presumed to be less than significant.

6.2 Project Alternative (Medium-Density Alternative)

Compared to the Proposed Project, the Medium-Density Alternative results in an approximate reduction of 14% of households (58,741 to 50,535) and an approximate reduction of 2% of employment (95,945 to 94,134).

Table 6-2 presents the Mira Mesa average resident and employee VMT for the Medium-Density Alternative. As shown, Mira Mesa is projected to have an average Resident VMT per Capita at 11.4 and an average Employee VMT per Employee at 24.4 under the Medium-Density Alternative conditions, which is 65.9% and 96.9%, respectively, of the 2012 regional averages for these efficiency metrics.

Table 6-2: Mira Mesa Medium-Density Alternative VMT Efficiency Metrics for Transportation Impact Analysis of Residential and Employment Uses

VMT Metric	Base Year (2012)	2050 Proposed Project			2050 Medium-Density Alternative		
	VMT Region	VMT	% of Regional Base Year Mira Mesa	SI?	VMT	% of Regional Base Year Mira Mesa	SI?
Resident VMT/Capita	17.3	10.7	61.8%	NO	11.4	65.9%	NO
Employee VMT/Employee	25.2	23.3	92.5%	YES	24.4	96.8%	YES

Between the Base Year to buildout of the Medium-Density Alternative, Mira Mesa's commercial retail square footage would increase by 1% (5,664,348 sf to 5,695,330 sf). With this increase in the commercial retail square footage the Mira Mesa Total VMT generated by all commercial uses is expected to increase under the Medium-Density Alternative. With the Medium-Density Alternative, it is anticipated that further redevelopment would maintain and possibly expand neighborhood and community-serving retail. The potential increase in VMT is not related to regional-serving retail, rather local-serving retail is proposed, which would result in shorter trips that originate and end within the community. Per OPR's Technical Advisory "local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than significant transportation impact." Therefore, impacts related to VMT for retail land uses would be less than significant.

Significance of Impacts

Residential Land Uses

The Medium-Density Alternative would not result in a significant impact for its residential land uses.

As shown in **Table 6-2**, the Medium-Density Alternative would not result in a significant impact for its residential land uses as the VMT is under the 85% threshold. Mira Mesa's Resident VMT per Capita for the Medium-Density Alternative is 65.9% of the Base Year regional average, and therefore, the transportation impacts related to residential uses are considered less than significant. When compared to the Proposed Project, the Medium-Density Alternative's VMT would be higher for its residential land uses.

Employment Land Uses

The Medium-Density Alternative would result in a significant impact for its employment land uses.

As shown in **Table 6-2**, the Medium-Density Alternative would result in a significant impact for its employment land uses as the VMT is above the 85% threshold. Mira Mesa's Employee VMT per Employee for the Medium-Density Alternative is 96.9% of the Base Year regional average, and therefore, the employee uses are considered to have a significant transportation impact. When compared to the Proposed Project, the Medium-Density Alternative's VMT would be higher for its employment land uses.

Retail Land Uses

The Medium-Density Alternative would result in a less significant impact for its retail land uses.

New retail development under the Medium-Density Alternative would typically redistribute shopping trips rather than create new trips. Although there is an increase to retail land uses under the Medium-Density Alternative scenario, the retail uses are anticipated to be locally serving and under OPR's guidance are presumed to be less than significant.