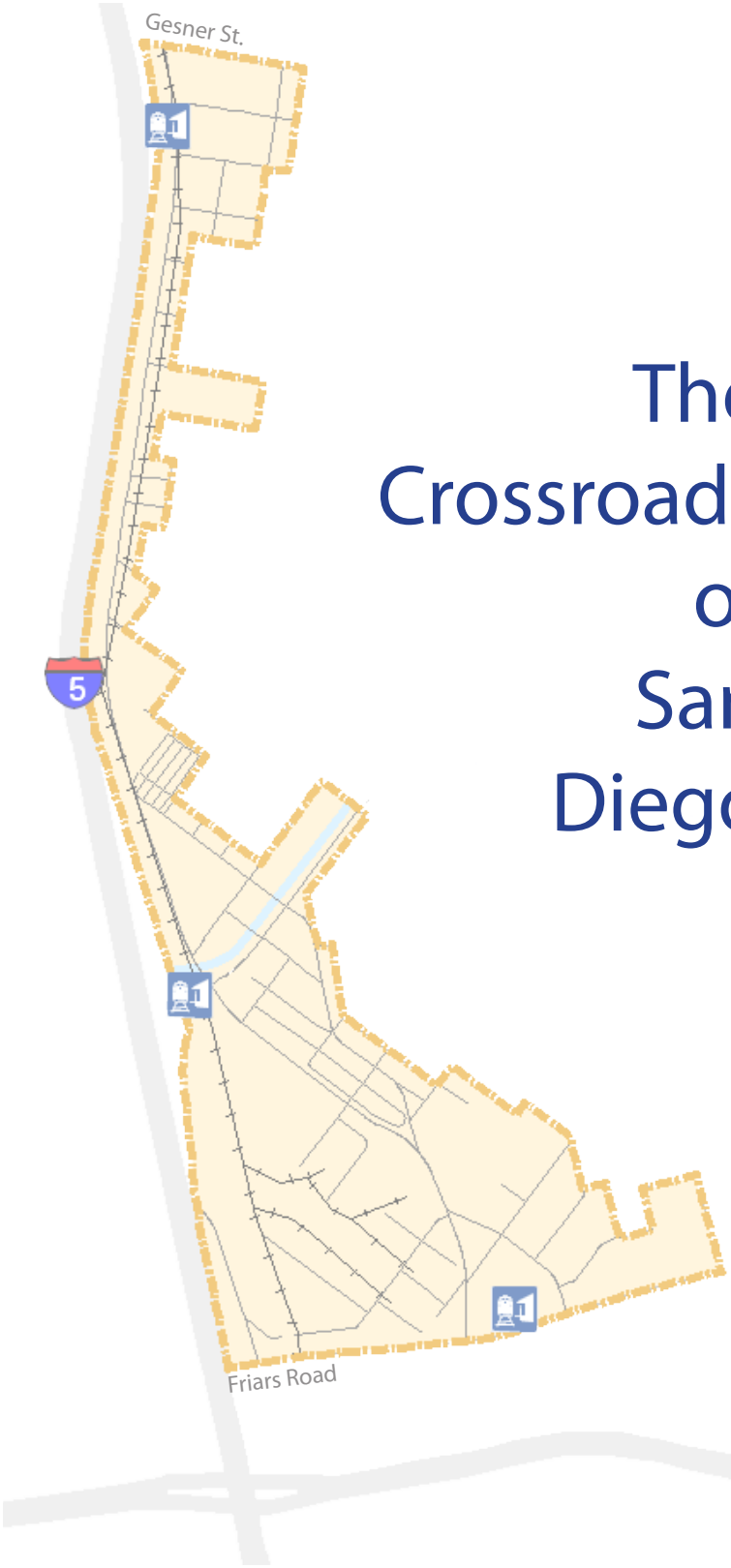
Morena Blvd Station Area Planning Study

Draft Report



The Crossroads of San Diego

March 2014

THE CITY OF SAN DIEGO

KTUA Planning + Landscape Architecture

Table of Contents

Table of Contents Continued

Table of Contents Continued

Table of Contents Continued

Table of Contents Continued

Table of Contents Continued

Appendices

Appendix A: Outreach Materials

- Multi-modal mobility questionnaire
- Maps from workshops
- Walk Audit
- Powerpoints, Displays, Agendas, Summaries

Appendix B: Market Conditions

Appendix C: Fiscal Analysis Materials

Figures

Tables

Acronyms

ALUCP	Airport Land Use Compatibility Plans
APCD	Air Pollution Control District
BID	Business Improvement District
BMP	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
CPIOZ	Community Plan Implementation Overlay Zone
dB	Decibel
dB-A	Decibels with Sound Filter
du/acre	Dwelling Unit
EDR	Environmental Data Resources
EIR	Environmental Impact Report
FAR	Floor Area Ratio
HCM	Highway Capacity Manual
IL	Industrial Light
Ldn	Day-Night Equivalent Level
Leq	Average/Equivalent Sound Level
LOS	Level of Service
LRT	Light Rail Transit
MAD	Maintenance Assessment District
MBAP	Morena Boulevard Station Area Planning Study
MPH	Miles Per Hour
MTS	Metropolitan Transit System
NAAQS	National Ambient Air Quality Standards
NNN	Triple Net
NSA	New School of Architecture
ROW	Right of Way
SANDAG	San Diego Association of Governments
SDAB	San Diego Air Basin
SPL	Sound Pressure Level
STC	Sound Transmission Class
TAZ	Traffic Analysis Zone
TOD	Transit Oriented Development
UCSD	University of California, San Diego
USD	University of San Diego
UTC	University Town Center

1 Introduction

The Morena Boulevard Station Area Planning Study (MBAP) is a coordinated transportation and land use planning study funded by a Caltrans Community Based Transportation Grant. The study is administered by the City of San Diego. The following sections explain the purpose, methodology, previous planning efforts, and community vision for the study.

1.1 Purpose

The MBAP is designed to address the future form of a community in the midst of change, both through the natural evolution of urban development and the introduction of a new form of transit with the Mid-Coast Light Rail Transit (LRT) Trolley extension.

1.2 Study Methodology

The study includes research and analysis combined with stakeholder input to produce a plan that is both technically sophisticated, but also reflective of the needs and desires of the community. The study was structured to integrate community input at each phase of the analysis, ensuring that ideas are incorporated in a timely and effective manner. Key study milestones include:

- Public outreach strategy/public notification of workshops
- Existing Conditions Report
- Public Workshop #1 to receive input on existing conditions
- Urban design vision, mobility concepts, and two land use scenarios
- Economic feasibility analysis of land use scenarios
- Public Workshop #2 to receive input on the land use scenarios and mobility concepts, identify preferred alternative
- Finalized land use, urban design, mobility recommendations
- Public Workshop #3 to present final recommendations and mobility projects
- Implementation strategy and final report

1.3 Previous Planning Efforts

The MBAP is a continuation of efforts that have been ongoing in the study area for many years. While the MBAP is an independent effort that starts with no preconceived ideas, it also recognizes the work that precedes it. Several of the previous planning efforts undertaken related to mobility and land use within the study area include:

- New School of Architecture (NSA) Student Input
- USD Real Estate Class Input /Sherm Harmer
- City of San Diego Pedestrian Master Plan
- City of San Diego Bike Master Plan
- Clairemont Ad-Hoc Community Plan Update
- Mid-Coast LRT Trolley Extension
- Linda Vista Community Plan
- Clairemont Mesa Community Plan

1.4 Project Context

The following sections provide baseline information about the study area and the surrounding neighborhoods. Though this information represents a "snap shot in time" of the dynamic nature of the urban environment, it helps to describe the various elements that shape the community and those who live within it. The following sections provide an overview of the political subdivisions of the study area, its demographics, housing, land use, property ownership, street network, transit facilities, natural setting, and man-made setting.

1.5 Overview of Study Area

The following sections provide an overview of some of the political and socio-economic boundaries that overlay the study area. Some of these areas are merely a means to report data about the study area, while others create jurisdictions that can have a meaningful impact on how the community is planned and how it can grow.

1.5.1 Contextual Planning Area

The contextual planning area (Figure 1-1) displays the community planning areas that surround the study area. The study area lies on the western/southwestern boundary of two community planning areas: Linda Vista and Clairemont Mesa. To the south is Old San Diego (Old Town) and to the west is Mission Bay Park. Interstate 5 and the railroad lines run immediately west of the study area and the San Diego River and Interstate 8 run immediately to the south. The contextual planning area graphic also illustrates the abundance of open space near the study area, most notably Mission Bay Park, the San Diego River, and Tecolote Canyon.

1.5.2 Market Area

The Morena study area lies within a larger market area that encompasses land as far east as State Route 163 (in Mission Valley), as far north as Balboa Avenue, as far west as Interstate 5, and as far south as Interstate 8 (see Figure 1-2). The market area's eastern boundary north of Mission Valley is defined largely by Tecolote Canyon/Via Las Cumbres Road. This Market Area boundary is used to set the local context of economic and demographic conditions that affect the smaller study area boundaries.

1.5.3 Station Area Walk Times

The station area walk times graphically display the amount of the study area (and surrounding areas) that can be reached by a pedestrian in 5, 10, and 15 minutes time increments (see Figure 1-3). This analysis utilizes existing walkways to determine available routes of travel. The more traditional method of displaying the area that should be studied as part of a Transit Oriented Development (TOD) effort often used a ¼ mile or ½ mile radius circle. This attempt was to capture the distance around a station that is within walking distance that most would be comfortable in making. However, this method often overstated or understated the actual areas within a 15-minute walkzone. Nowadays, a true walk time analysis is the preferred method of determining the boundaries that should be analyzed around a station. This zone can also be expanded if missing connections and barriers of travel were removed or resolved. Later in the analysis phase, the expansion of walkzones related to specific improvements of access will be generated to determine the effectiveness of these changes.

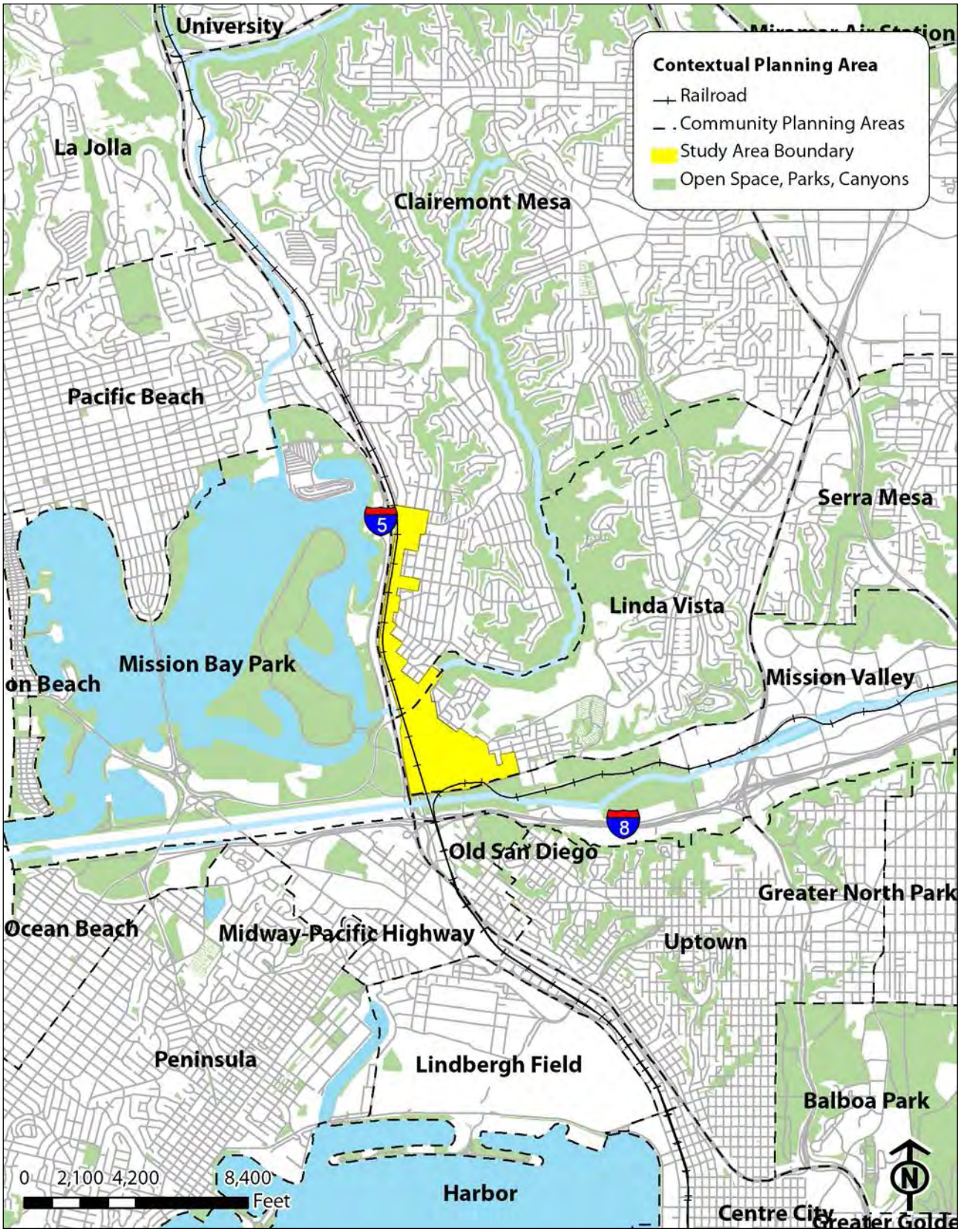


Figure 1-1: Contextual Planning Area

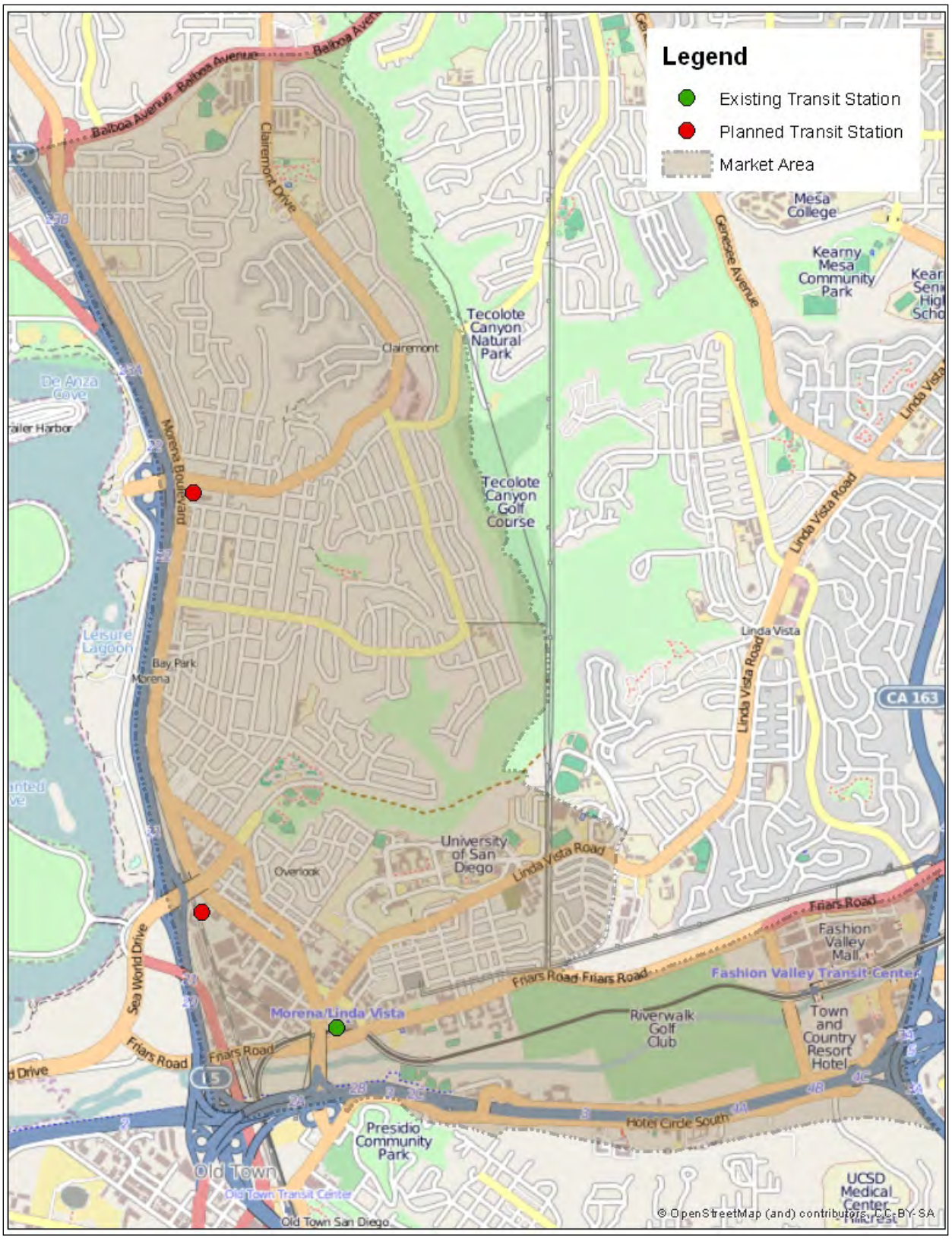


Figure 1-2: Market Area

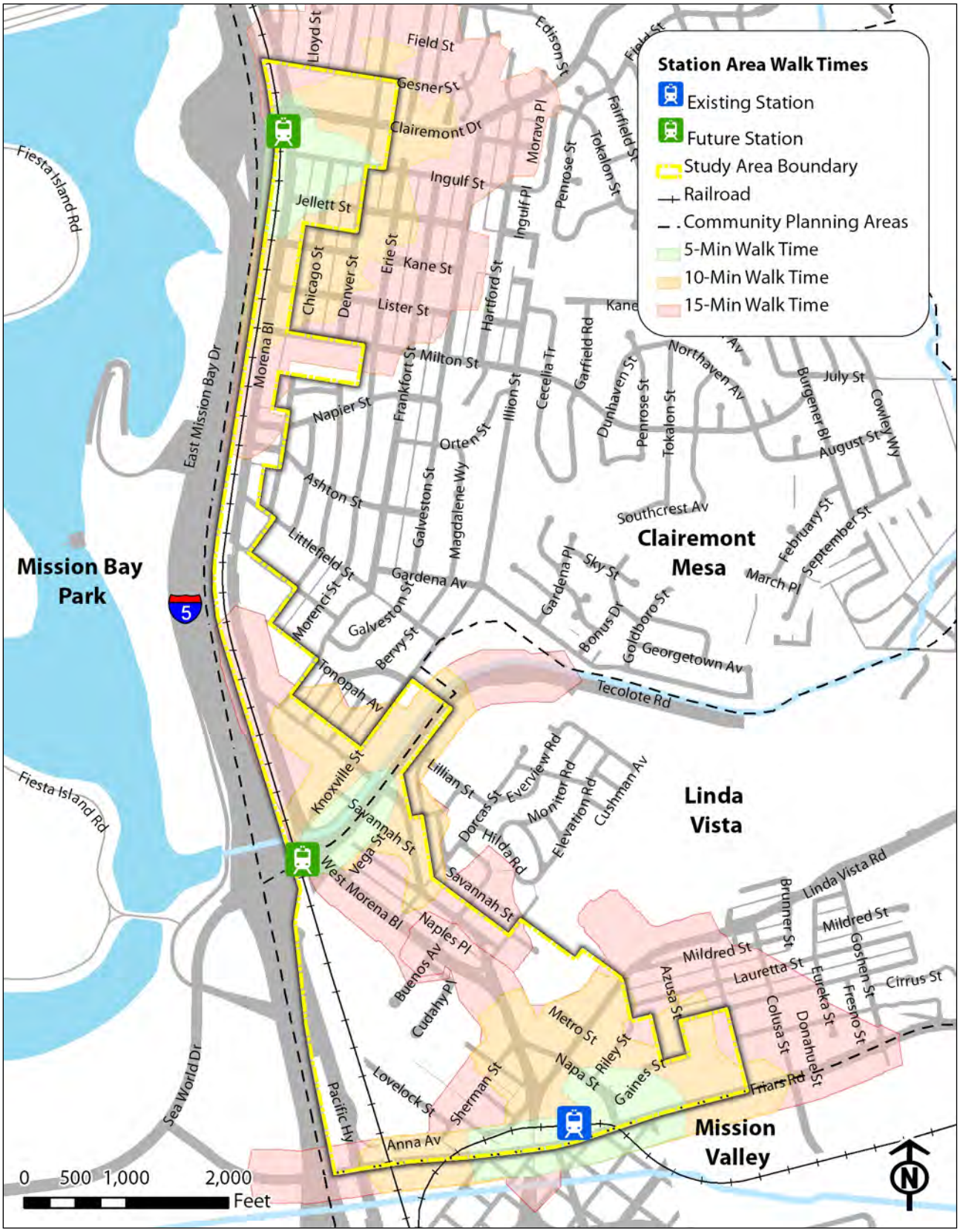


Figure 1-3:Station Area Walk Times

1.5.4 Precise Study Boundaries

The area for which this study will make recommendations is defined by the precise study area boundaries (see Figure 1-4). The northern extent of the study area is Gesner Street, one block north of Clairemont Drive. The southern extent is Friars Road. Interstate 5 forms the western boundary and the eastern boundary is defined by a series of roadways that roughly trace the foot of the mesa south of Tecolote Creek, which extends one block east of Morena Boulevard north of Tecolote Creek.

1.5.5 Council District Boundaries

The study area lies entirely within Council District 2 (Kevin Faulconer), although its southern boundary is the boundary between Districts 2 and 7 (Scott Sherman) (see Figure 1-5). Council District 6 (Lorie Zapf) is also near the northern boundary of the study area, Coucilwoman Zapf has historically held an interest in Morena Boulevard, although it is technically not a part of her district.

1.5.6 Smart Growth Boundaries

The San Diego Association of Governments (SANDAG) has identified Smart Growth Areas throughout the San Diego region SANDAG defines each as:

- Town Center: an area of residential and office/commercial uses, including mixed uses, that draws from the immediate subregional area. Desired building types include low to mid rise buildings at 20-45 dwelling units (du)/acre and 30-50 employees/acre near transit service. The Town Center is typically served by one or more transit lines with high frequency service and regional arterials.

- Mixed Use Transit Corridor: an area of residential and office/commercial uses, including mixed uses, that draws from nearby communities and is linear in nature. Desired building types include a mix of low, mid, and high-rise buildings at 20-75 du/acre and commercial and retail supportive uses. The Mixed Use Transit Corridor located along a major arterial, served by frequent corridor/regional transit service and can include shared use park and ride facilities.
-
- Community Center: an area of residential and office/commercial uses, including mixed uses, that draws from nearby neighborhoods. Desired building types include low to mid-rise buildings at 20-45 du/acre and 20-45 employees/acre near transit service. The Community Center is typically served by at least one transit line with high frequency service and regional arterials/collector streets.
-
- Urban Center: an area of mixed use employment that draws from throughout the region. Desired building types include mid to high-rise buildings at 40-75 du/acre and 50+ employees/acre near transit service. The Urban Center is typically served by freeways with multiple access points and several corridor/regional lines of transit with very high frequency service.

The Community Center designation applies to the vicinity of the intersection of Clairemont Drive and Morena Boulevard (see Figure 1-6). The Mixed Use Transit Corridor follows W

Morena north from Vega Street, past the merge with Morena Boulevard, north to Clairemont Drive. The overlay extends generally one block to the east from Morena Boulevard. The Town Center runs along Morena and West Morena Blvd. from the northern merge to the southern extent of the study area and the Urban Center starts at Napa Street/Friars Road and continues east towards Fashion Valley Mall.

1.5.7 Business District/Maintenance Assessment District Boundaries

There is one Maintenance Assessment District (MAD) and one proposed Business Improvement District (BID) within the study area. The existing MAD is the Linda Vista MAD and follows Linda Vista Road down the hill from USD, extending one block on either side of the street as far south as Napa Street (see Figure 1-7).

The proposed Morena BID would encompass most of the study area, with the exception of the Knoxville Street RV Park the back of the Milton Street car dealership, and the properties north of Clairemont Drive and east of Chicago Street.

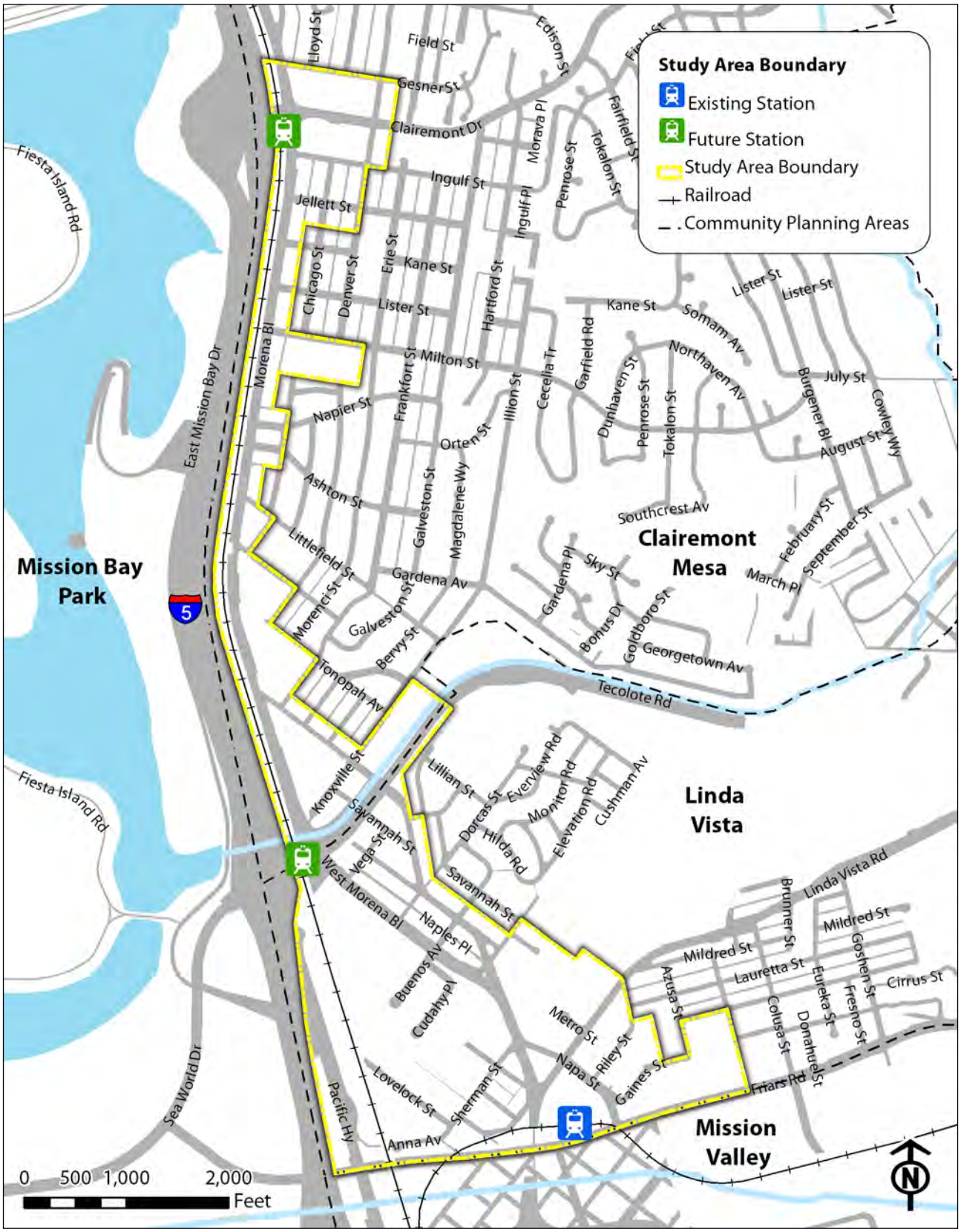


Figure 1-4: Precise Study Area Boundaries

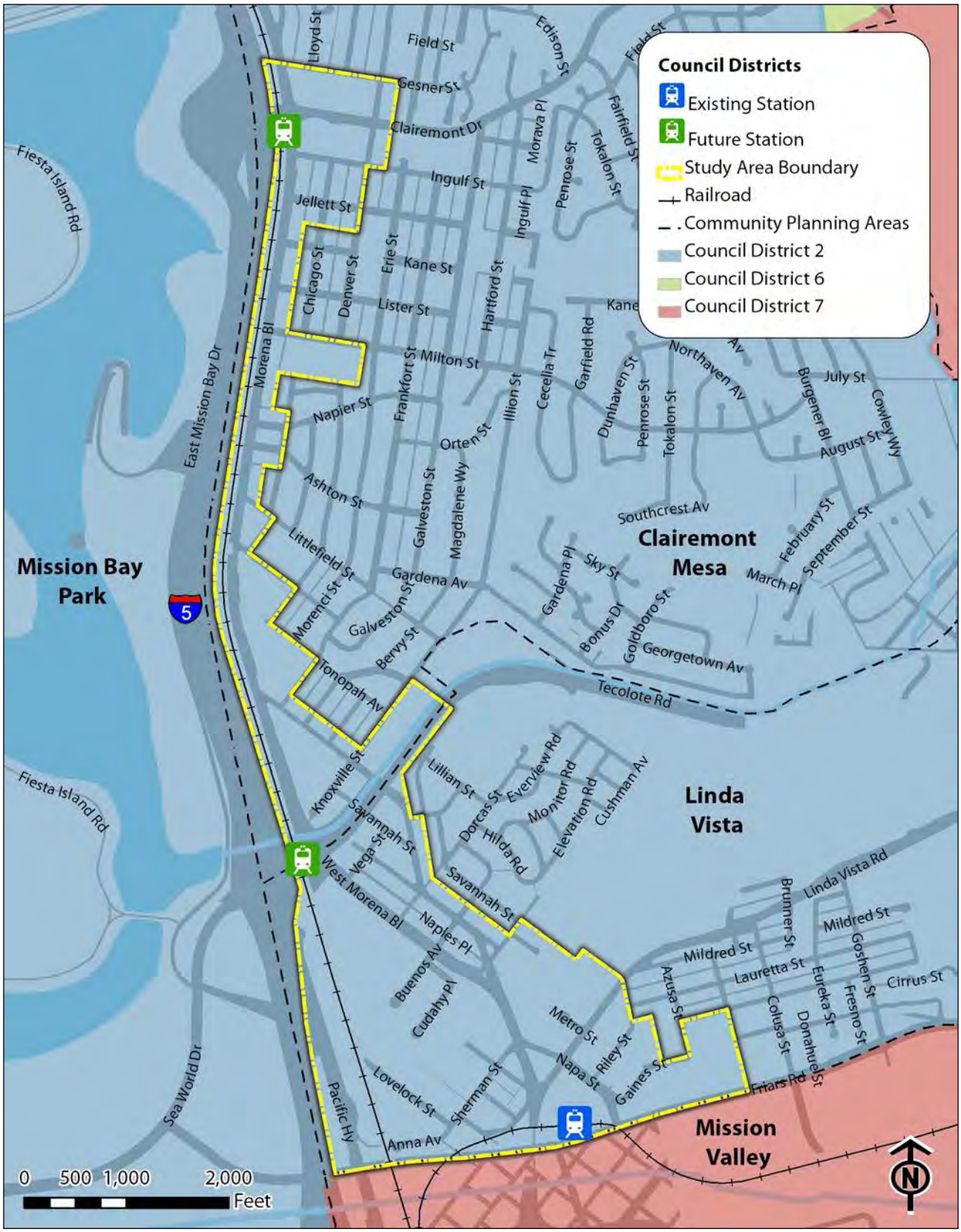


Figure 1-5: Study Area Council Districts

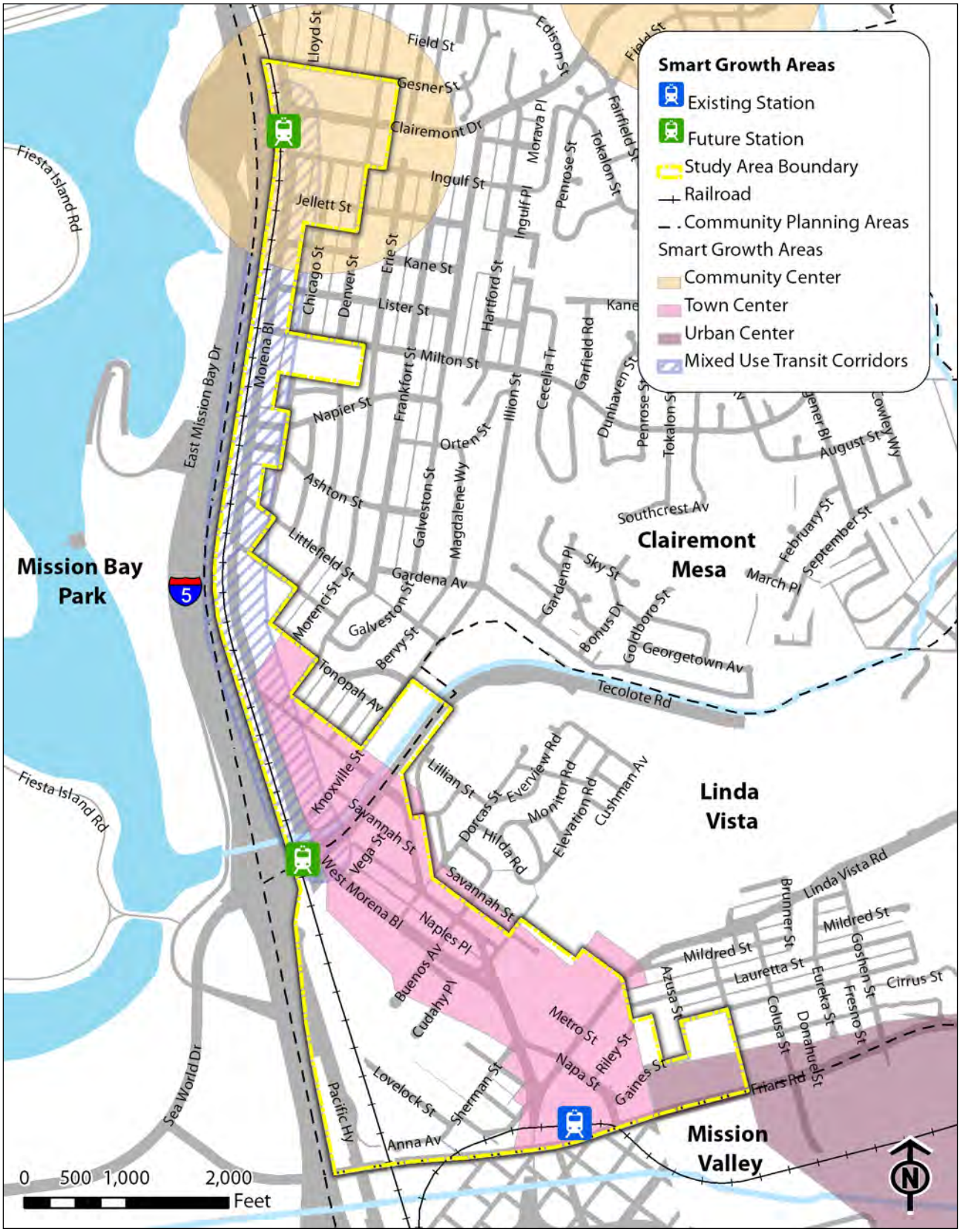


Figure 1-6: Smart Growth Opportunity Areas

Figure 1-7:Business and Maintenance Districts

1.6 Demographics

The following sections help to describe the study area and its environs in terms of demographic data. This information is important in understanding the socio-economic context of the study, which is crucial to the success of both public outreach and economic analysis. The information provided below has been aggregated into four units, based on the source of the information: Traffic Analysis Zone (TAZ), neighborhood, market area, and community planning area. The unit of analysis was chosen based on data available and applicability to the demographic. Statistics at the City (San Diego) and County level are also provided for comparison. All data used is U.S. Census data, as compiled by KTU+A, SANDAG, and/or the City of San Diego.

1.6.1 Population and Households

From 2000 to 2010, the market area population increased, although not at a pace to match the City and County. The market area's population increased 5% from 2000 to 2010, while the City's grew at 7% and the County's grew at 10%. Figure 1-8 shows the distribution of population in the study area by TAZ. The most populous TAZ near the study area is to the east/southeast between Linda Vista Road and the San Diego River, at up to 30 persons/acre. The vast majority of the study area, however, is lowly populated, averaging between zero and two persons/acre. Figure 1-9 displays a similar trend, with almost no households in most of the study area. The most households within the study area occur near Clairemont Drive and between Milton Street and Tonopah Avenue.

Community/ Neighborhood	Residential Zoned Land	Population (persons)	Population Density (persons/ square mile)	Owner-Occupied Housing	%Residents > 7 years
Linda Vista					
Morena Neighborhood	42%	7,570	6,135	48%	76%
Clairemont Mesa					
Bay Park Neighborhood	62%	15,309	5,439	57%	91%

Source: U.S. Census Bureau, 2010

The number of households in the market area increased only 1% from 2000 to 2010, significantly less than the rate of population growth. By comparison, households within the City grew at 7% and within the County grew at 10%, the same as their respective increases in population.

The market area has a small proportion of family households (48% for the market area vs. 59% for the City and 66% for the County) and households with children (18% for the market area vs. 31% for City and 35% for County. The market area also has a smaller household size at 2.11 persons/household vs. 2.60 for the City and 2.75 for the County. Ten percent of the market area lives in group quarters vs. 4% for the City and 3% for the County. The majority of this population lives near USD.

1.6.2 Race and Ethnicity

The residents in the Linda Vista community planning area are 64% ethnically diverse and 36% White. The Hispanic population is approximately 31%, the Asian & Pacific Islanders population is approximately 24%, and the Black population is approximately 5%. The residents of the Clairemont Mesa planning area are predominately white at 63% and 37% ethnically diverse.

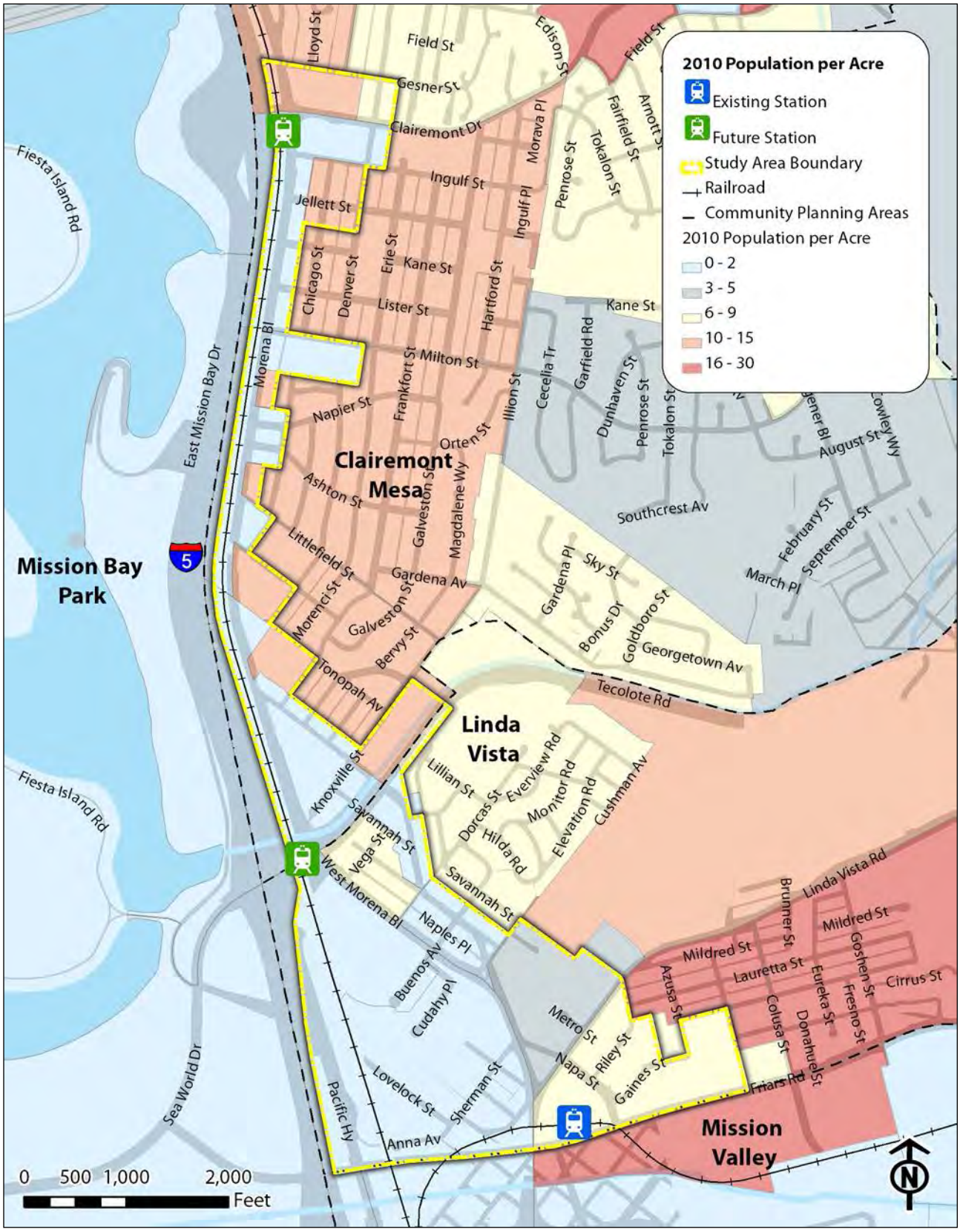


Figure 1-8:Population

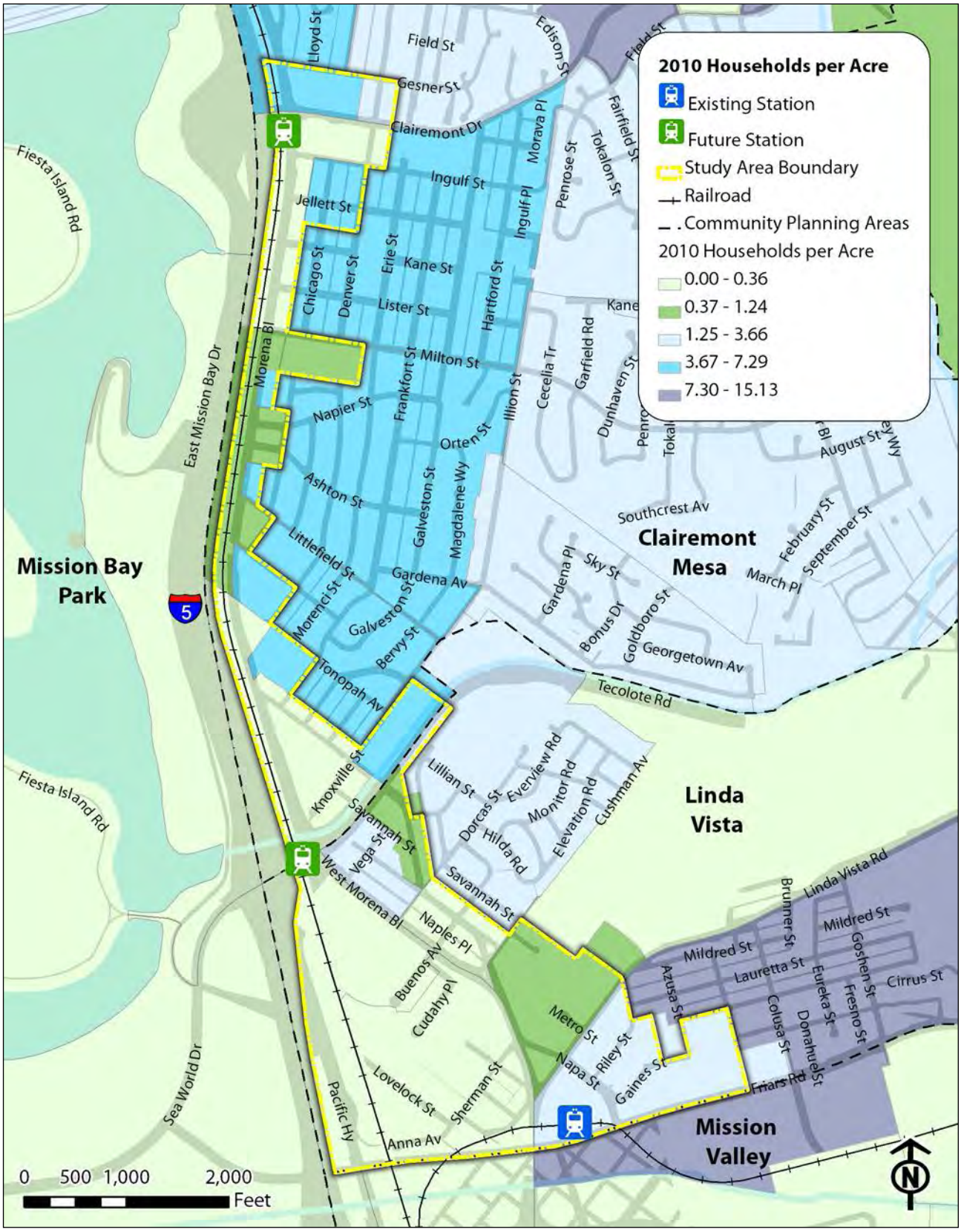


Figure 1-9: Households

1.6.3 Income and Employment

The median annual household income in the market area as a whole is $66,000, which is slightly higher than the City ($64,000) and County ($64,000). A comparison of the median income between the two community planning areas constituting the study area shows that residents of Clairemont Mesa earn approximately $15,000 dollars/year more than their neighbors in Linda Vista. Market area per capita annual income is also slightly higher ($36,000) than the City ($33,000) and County ($31,000). This suggests that residents living within the market area have a reasonable amount of disposable income.

The distribution of income within the market area reflects trends of both the City and County. In the market area, approximately 26% of the population earns less than $25,000/year, 45% earns $25,000 - $99,999, and 29% earns at least $100,000.

Community/ Neighborhood	Median Income
Linda Vista	
Morena Neighborhood	$55,108
Clairemont Mesa	
Bay Park Neighborhood	$69,746

Source: U.S. Census Bureau, 2010

Figure 1-10 displays the employment in the study area by TAZ. The two highest concentrations of employment occur between Morena and West Morena Blvd. between the north and south splits. This may be due to the fact that there are many small scale retail businesses in the area that employ a moderate number of people each. The remainder of the study area employs a moderate number of people, and more than the areas to the east, which is understandable given the transition to residential land uses to the east.

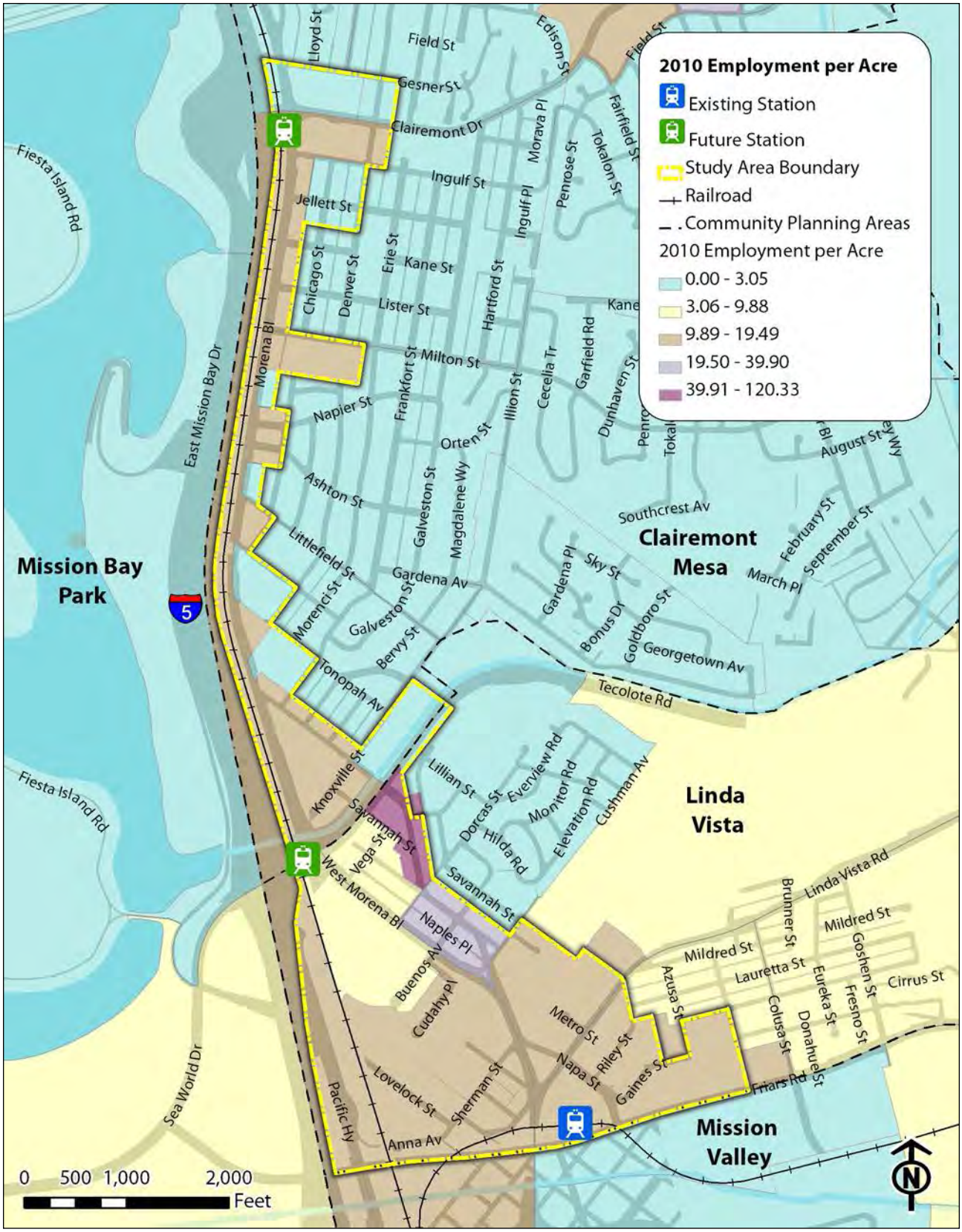


Figure 1-10: Employment

2 Community Outreach Process

Our Project Team's goal of having the "Community Outreach and Participation Framework" focus on building stakeholder consensus; and providing outreach to the general public to communicate information on the project and provide opportunities for public input was achieved. The ultimate goal for this project was to support the existing and proposed transit system and to increase mobility locally and within the region.

The outreach efforts included:

- Building awareness about the Morena Blvd. Station Area Planning Study (MBSAPS) and its importance to regional mobility and local access
- Conducting an open and transparent public process that provides timely public information, opportunities for interested members of the public to comment, and provide input to the decision-making process for the project
- Meeting regulatory public involvement requirements
- Seeking opportunities to involve a broad and diverse range of stakeholders

2.1 Public Outreach Strategy

One of the most challenging community outreach issues was the complexity of balancing the community's desire to retain the residential character now found in Clairemont and Linda Vista with the economic pressures for infill development, changing retail economic models, increased mobility choices and the dynamics of a significant seasonal student population.

For the project to have greater success with community outreach efforts we created partnerships with various community stakeholders. This helped the project to more effectively address and incorporate the broader community's ideas, concerns, and thoughts as they relate to mobility and land use improvements for the area. By establishing and maintaining a clear line of communications through well-orchestrated community partnerships, we were able to achieve participation that better reflected the demographics of the users and the community and better represent the interests of the general public that stands to be affected (either positive or negative) by the project.

The following are some of the strategies we implement to achieve the objectives of the MBSAPS:

- Established a clear project identity and conveyed consistent messages about the MBSAPS, its importance to increased mobility in the region, and its benefit to the community and region.
- Involved public stakeholders in the process on a regular basis to foster understanding and agreement on issues related to MBSAPS.
- Used a variety of communication methods to reach audiences including presentations, one-on-one/small group meetings, public workshops, e-blasts, written materials, online and media communications.
- Coordinated outreach efforts with Mid-Coast Corridor Transit Project (MCCTP) outreach representative to reduce confusion.
- Created a fact sheet that explained the goals and scope of each project MBSAPS/MCCTP.

- Provided the public with timely information about the MBSAPS, on a regular basis through presentations, website links, online communications, written materials and news updates.
- Documented public comments received during the community outreach process.
- Provided information to the public about the process and opportunities for review of public documents and opportunities for public comments.
- Utilized traditional and social media to convey project information to a broad audience.

Enhancing community participation and input required additional research of the non-traditional groups that had not yet been represented in the outreach process. This was important to ensure that the City of San Diego hears from all those who stand to be impacted by the project and to help guide the decision making process. In an effort to accomplish this we interviewed key community leaders and organizations within the study area that were willing to participate and motivate others to join in the process. This led to important community partnerships with Canyon Ridge Baptist Church, the San Diego County HHSA– Community Wellness Department and the San Diego Unified Schools Vietnamese Parents for a Quality Education. Through these partnerships we were able to enhance the Projects outreach efforts and increase community awareness within the Latino and Vietnamese communities.

We also assisted the City in notifying businesses and residents of the Morena Blvd. Station Area and invited them to participate in three community workshops that were tailored to gather the community's ideas, concerns, and thoughts. The workshops were designed to educate stakeholders about the topics of land-use, mobility, and community placemaking.

2.2 Public Workshops

Once the project area stakeholders had been identified and approached, the community at large was introduced to the MBSAPS process through a first of three public workshops. At each community workshop, we emphasized that community participation was going to be vital throughout the planning process and that the input provided should help to successfully balance community needs and give them a better project for their community.

To help channel their ideas and register their concerns, we provided simple and concise verbal and written guidelines on the areas needing their input and offered suggestions and examples on how to effectively contribute to the process. Each workshop was approximately three hours in length, and were scheduled and designed to solicit community-wide participation. We alternated the public workshops between weekday evenings and weekend days, to help provide working parents with a choice. The workshops also provided supervised child activities to allow those with children to actively participate. The goal of the workshops was be identify issues important to the community and establish an overall vision desired by the community. A contact database was set-up for quick and frequent communications regarding workshop notices, reminders and follow-up, project-related activities (such as questionnaires and walk audits), website links, newsletter release updates, and individual follow-up briefings. Each workshop averaged 5 to 7 email messages per contact. All three Workshops received excellent attendance by a wide representation of the study areas stakeholders and a fair representation of the general public from the area. Attendance averaged 65 to 75 people per workshop.

Public Workshop 1 – Introduction – Initial input on vision, goals and objectives as well as concerns and issues that will need to be addressed

Public Workshop 2 – Analysis – Land use trends, market opportunities and constraints, mobility conditions and options, existing zoning and land use flexibility and transit supportive planning policies

Public Workshop 3 – Concepts –Solutions for mobility issues, suggestions for land use changes and design guidelines to protect current uses and users in the area.

2.2.1 Workshop Format

The community workshops were designed as a mix of large-group presentations and open house /information booths set up with resources, materials, and representatives to answer questions. The workshops were set up to encourage comfortable, interactive learning and sharing experience for participants. The priority for the workshops was to learn about the community's values. All workshop handouts, presentation materials, and displays were provided in English and Spanish, as needed. The Workshop were designed so that all participants could visit the stations, interact with City staff and consultant team members, and have their comments, ideas, and suggestions recorded. The data gathered at the workshop was useful in learning about the community's desires, obtaining their comments and feedback on data and information gathered, and for clarifying and confirming the data. As part of the workshop agenda, an overview of the project, project purpose, involvement opportunities and some level of project education was provided as part of an informal presentation. At all three Workshops, Simultaneous Spanish-English translation was provided and Vietnamese translation was offered.

2.3 Walk Audit

Early on, the team conduct a walk audit with public official representatives and members of the community from the study area. Community members were provided with two methods to participate – one in-person walk audit or a self- guided walk audit with prepared materials. Stakeholders that have a great deal of knowledge in the area were encouraged to participate for the added support and expertise they were able to provide during the walk audit process. In consultation with City staff, careful reviews of possible routes was discussed in order to make sure that the routes were typical of the study area and to help highlight the specific issues or concerns that dominate the area. The objectives of the audit was to become intimately familiar with the Morena Blvd. Station Area and to evaluate site constraints and potential solutions. During the walk audit, the consultant team representatives actively recorded the input provided by the stakeholders, but also accepted written comments made during the audit. The audit also provided an opportunity to encourage community members to attend and participate in the workshops. Upon completion of the in-person walk audit, a meeting was conducted to assess the issues and opportunities and constraints of key corridors in the area.

2.4 Multi-Modal Mobility Questionnaire

We assisted with the development of Multi-Modal Mobility Questionnaires with the direction of City staff in order to engage the wider community. These questionnaires were distributed at community events, project meetings, and posted online to collect ideas, concerns, and thoughts regarding mobility issues and the potential development around the stations. We also assisted with preparing and reviewing materials for distribution and coordinated with City staff on community areas and routes to target for survey mailers, door to door surveys, email surveys, and surveys available online. All surveys were produced in English and Spanish and provided bilingual team members for door to door surveys, as needed. As an example we conducted a survey of the restaurants participating in the "Taste of Morena," an event sponsored by the Morena Business Associations. We were able to interview and collect over forty questionnaires from each restaurant owner or management. We also participated in an all day booth opportunity at the Clairemont Family Day at the Bay where we were able to interview and collected over sixty questionnaires from event participant of the area all focusing on fitness and wellness in the neighborhood.

Additionally, we surveyed 68 businesses in the Morena District over a three day period and distributed 250 door hangers to other business in the area. Our focus areas for the survey included businesses along Clairemont & Morena, W Morena Blvd, Morena & Linda Vista Road and the Anna/Sherman industrial area. The survey included questions such as, "How long have you had your business in the Morena District? What do you view as the biggest amenity or strength of Morena District? What would you say is biggest current challenge to the success of our business? Some of the frequent benefit identified by most was for the Morena Districts close proximity to Mission Bay and to the USD campus; Many also expressed greatest dissatisfaction with traffic mobility and lack of parking in the Morena Area. Employers in the industrial area also expressed the need to make their work areas more walkable to/from transit and for recreational walking and buying power; Other provided suggestions for traffic calming measures, improved walking and biking choices and upgraded landscaping and signage.

2.5 Initial Public Involvement

Our early public involvement activities provided us with the opportunity to introduce the public to the MBSAPS and its development process; and gain initial feedback about how they would like to be involved, and provide input. Public involvement strategies during this period included preparing informational materials to help educate the public about the MBSAPS. These materials provided information about the project, the development process, and the information and/or referrals about how to get involved in the process. These informational materials included: project background information, project area map, fact sheet, Frequently Asked Questions, multimedia presentations, videos, and other relevant information. These materials were also provided to the City for placement on the City's website and were updated as needed throughout the process.

2.5.1 Conducted Stakeholder Briefings

We conducted briefings with a representative group of key stakeholders prior to the first workshop as an opportunity to introduce the MBSAPS, the development process and the upcoming opportunities for public involvement. These briefings helped the City assess

the levels of awareness about the project and identify issues to address through public involvement activities.

Topics that were covered during the briefings included:

- Preliminary project information
- Understanding of the process and how they can provide input
- Input on proposed means of public involvement
- Recommendations on other stakeholders to involve
-

In preparation for the first Workshop we approached and briefed the key stakeholders prior to the first Workshop. In addition, we attended the February/March monthly meetings of these organizations to announce and promote attendance at the Workshop.

2.5.2 Participate in Stakeholder Community Events

To reach a wider audience, project information was provided and community was input sought through participation at community events and booth opportunities. These events were sponsored by community groups of the area, with a special emphasis towards a specific audience such as minority groups. Information was shared about the project and its benefits to the community and feedback was collected from members of the public through comment cards, surveys and other means. These events also provided an opportunity for event attendees to opt into e-blast contact database. All community activities were recorded in the Community Outreach Calendar.

2.5.3 Ethnic Community Outreach

The residents in the Linda Vista study area are 64% ethnically diverse and 36% White. The Hispanic population is approximately 31%, the Asian & Pacific Islanders population is approximately 24%, and the Black population is approximately 5%. The residents of the Clairemont area are predominately white at 63% and 37% ethnically diverse. We were careful to administer culturally sensitive outreach methods and techniques to engage this important yet challenging community.

The limited outreach scope authorized for this project limited our ability to reach the limited English proficiency stakeholders. This is an important consideration to ensure social equity, environmental justice, non-discrimination and accessibility. We were however proactive in our efforts to ensure that audiences that may not traditionally participate in the transportation planning process were at least given the opportunity to participate. These audiences include, but are not limited to: minority groups, non-English speakers, and lower income households, individuals with disabilities, the elderly, and transit riders.

To reach audiences, organizations and media outlets representing these communities we approached key community leaders and organizations to provide project information, solicit participation and input, and provide a means for communicating back with members of these communities. Participation was encouraged via presentations to these organizations, participation in events sponsored by these organizations or targeted at these audiences, publishing articles in organizational newsletters, and publishing notices

and articles in ethnic media outlets. Additionally, we identified a number of local organizations that work with or represent underserved populations in the project area such as Canyon Ridge Baptist Church, San Diego Unified School District-Vietnamese Parents for a Quality Education - and the San Diego County HHSA – Community Wellness department to enhance outreach efforts and increase community awareness and input from those communities most difficult to reach.

2.6 Stakeholder Briefing Matrix

The following table lists stakeholders/interest groups that were contacted as a part of the outreach of the MBSAPS. The table details the different methods that were used to contact each group, based on the group's constituency, visibility, and/or sensitivity to engagement in projects like the MBSAPS. The methods listed were derived from those explained above and were executed by our team consisting of City staff, consultants, community leaders/representatives.

Table 2-1: Stakeholder Briefing Matrix

Morena Blvd Station Area Planning Study Stakeholder Briefing Matrix		
Stakeholder Organizations	**Outreach & Community Partnering**	**Person Attending**
Asian Business Association	Phone Interview/Request Flyer Dissemination	JLC
Asian Heritage Coalition	Phone Interview/Request Flyer Dissemination	JLC
Bayview Plaza Development Owners	Meet & Greet/Brief Project Description/Timeline	KTU+A/JLC
Chicano Federation	Phone Interview/Request Flyer Dissemination	JLC
City of San Diego Disabled Services Advisory Committee	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A/JLC
Clairemont Community Planning Group	Attend Meeting/Brief Project Description/Timeline	City/KTU+A JLC
Clairemont Town Council	Attend Meeting/Brief Project Description/Timeline	City/KTU+A JLC
Convivio Latino-Bayside	Meet & Greet/Announce & Distribute Workshop Flyer	JLC

Filipino-American BID	Phone Interview/Request Flyer Dissemination	JLC
Filipino-American Chamber of Commerce	Phone Interview/Request Flyer Dissemination	JLC
Greater Clairemont Chamber of Commerce	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A/JLC
Jerome's Furnishings – Jerry Navarra	Meet & Greet/Brief Project Description/Timeline	KTU+A/JLC
Kevin Faulconer, Councilman District 2	Attend Meeting/Brief Project Description/Timeline	City/KTU+A Team Member
Linda Vista Civic Association	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A/JLC
Stakeholder Organizations	**Outreach & Community Partnering**	**Person Attending**
Linda Vista Community Collaborative	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A/JLC
Linda Vista Community Development Corporation	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A/JLC
Linda Vista Community Planning Group	Attend Meeting/Brief Project Description/Timeline	City/KTU+A JLC
Linda Vista Town Council	Attend Meeting/Brief Project Description/Timeline	City/KTU+A JLC
Lorie Zapf, Councilwoman District 6	Attend Meeting/Brief Project Description/Timeline	City/KTU+A Team Member
MANA	Phone Interview/Request Flyer Dissemination	JLC
Mesa Community College – Associated Student Government	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A/JLC

Mexican American Business & Professional Association	Phone Interview/Request Flyer Dissemination	JLC
Mission Bay Park Committee	Attend Meeting/Brief Project Description/Timeline	City/KTU+A Team Member
Mixtec- Familia Indigena Unida	Meet & Greet/Announce & Distribute Workshop Flyer	JLC
Morena Business Association	Attend Meeting/Brief Project Description/Timeline	City/KTU+A Team Member
Neighborhood House Association	Phone Interview & Distribute Workshop Flyer	JLC
Old Town Community Planning Committee	Attend Meeting/Brief Project Description/Timeline	City/KTU+A JLC
Old Town Historical State Park Committee	Phone Interview/Request Flyer Dissemination	JLC
San Diego Mesa College Workforce/Students/Campus Organizations	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A/JLC
San Diego Workforce Partners	Phone Interview/Request Flyer Dissemination	JLC
Senior Housing/Assisted Living	Meet & Greet/Announce & Distribute Workshop Flyer	JLC
Tecolote Canyon Citizens Advisory Committee	Attend Meeting/Brief Project Description/Timeline	City/KTU+A Team Member
Urban Corps of San Diego County	Meet & Greet/Announce & Distribute Workshop Flyer	JLC
USD Sherman Harmer-School of Business, Real Estate Dept/USD Associated Students	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A/JLC
USD Workforce/Students/Campus Organizations	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A/JLC

Vietnamese Advisory Group	Meet & Greet/Announce & Distribute Workshop Flyer	JLC
Walk San Diego	Phone Interview/Request Flyer Dissemination	JLC
Other General Stakeholders	**Outreach & Community Partnering**	**Person Attending**
Bayside Community Center	Post Workshop Notice	JLC
Building Industry Association	Phone Interview/Request Flyer Dissemination	JLC
Clairemont Hills Kiwanis	Phone Interview/Request Flyer Dissemination	JLC
Mid-Coast Corridor Transit Project Working Group	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A
Move San Diego	Phone Interview/Request Flyer Dissemination	JLC
NAIOP	Phone Interview/Request Flyer Dissemination	JLC
Old Town San Diego Chamber of Commerce	Meet & Greet/Announce & Distribute Workshop Flyer	JLC
San Diego Bicycle Coalition	Meet & Greet/Announce & Distribute Workshop Flyer	KTU+A/JLC
San Diego County Taxpayers Association	Announce & Distribute Workshop Flyer	KTU+A/JLC
San Diego Highway Development Association	Phone Interview/Request Flyer Dissemination	JLC
San Diego Housing Federation	Phone Interview/Request Flyer Dissemination	JLC
San Diego-Imperial Counties Labor Council	Phone Interview/Request Flyer Dissemination	JLC
The Urban Land Institute	Phone Interview/Request Flyer	JLC

	Dissemination	
Media	**Outreach & Community Partnering**	**Person Attending**
Asian Journal	Request Posting of Workshop Notice in Community Section	JLC
Clairemont Community News	Request Posting of Workshop Notice in Community Section	JLC
Diario San Diego	Request Posting of Workshop Notice in Community Section	JLC
El Latino	Request Posting of Workshop Notice in Community Section	JLC
Filipino Press	Request Posting of Workshop Notice in Community Section	JLC
Hispanos Unidos	Request Posting of Workshop Notice in Community Section	JLC
La Prensa	Request Posting of Workshop Notice in Community Section	JLC
USD Newspaper – The Vista	Request Posting of Workshop Notice in Community Section	JLC
San Diego Mesa College Newspaper – The Mesa Press	Request Posting of Workshop Notice in Community Section	JLC

3 Existing Conditions

3.1 Land Use Overview

The study area is currently dominated by two land uses: commercial and light industrial (see Figure 3-11). The industrial is concentrated in the southern end of the study area, whereas the narrow northern extent is primarily commercial. Some multi-family and mobile home land uses occur near Clairemont Drive, near Tecolote Creek and near the Morena/WMorena northern merge and at the existing Morena Linda Vista Trolley Station. Other miscellaneous land uses within the study area include education, institutions, transportation, communications, and utilities.

Land uses bordering the study area on the east exhibit a strongly residential character. The land falling within the Clairemont planning area is almost exclusively single family detached residential, while the land in the Linda Vista planning area is a mix of single family (attached and detached), multi-family, and mobile home, especially between Linda Vista Road and Friars Road.

Land uses to the south and west of the study area are either open space parks or recreation.

3.2 Ownership

Figure 3-12 shows the presence of owner-occupied residential dwelling units in the study area. Although overall residential land uses only comprise a small portion of the study area, approximately half of the residential units are owner-occupied. It should be noted, however, that the mobile home parks are counted as being owner-occupied, even though the units a mobile.

Figure 3-11: Land Use

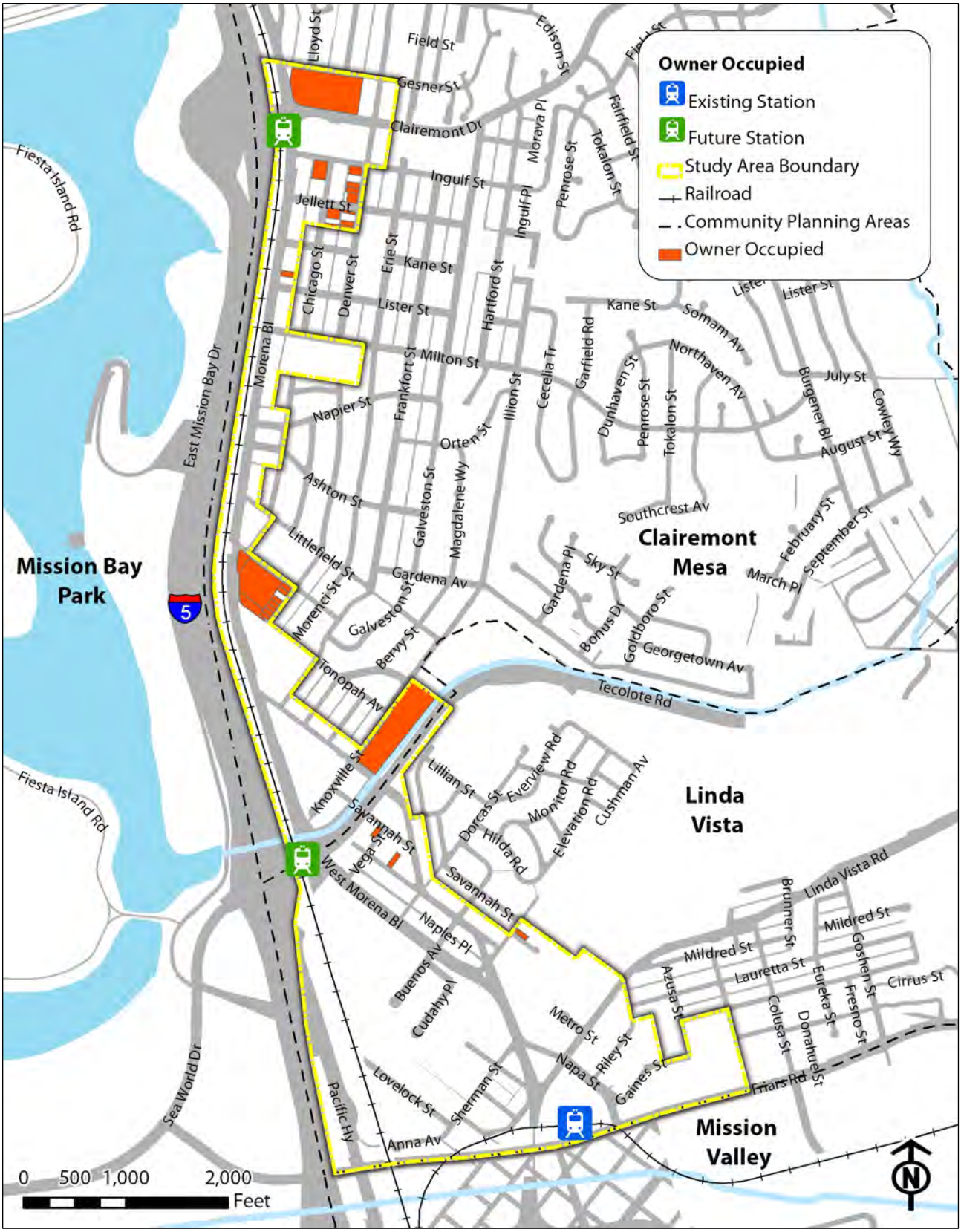


Figure 3-12:Owner-Occupied Residential

3.3 Overview of Street Network

There are three categories of streets in the study area, each with a distinct definition and set of standards:

- Major Streets: according to the City of San Diego's street design manual, can be either four or six lane roadways. The Right of Way (ROW) for these roadways ranges from 118 feet to 130 feet and the design speed ranges from 45 miles per hour (MPH) – 55 MPH. Major streets can include travel lanes, turn lanes, medians, on-street parking (parallel), parkways, sidewalks, crosswalks, and bike lanes.
    - The Major Streets present near the study area include Pacific Highway, Friars Road, Linda Vista Road, and Clairemont Drive.
- Collector Streets: are either two or four lane roadways. The ROW for these roadways ranges from 54 feet to 122 feet and the design speed ranges from 30 MPH – 35 MPH. Collector streets can include travel lanes, turn lanes, on-street parking (parallel) parkways, sidewalks, crosswalks, and bike lanes.
    - Collectors include Morena Boulevard from Gesner Street to the Split with W Morena (north), W Morena Boulevard, Morena between Linda Vista and the split with W Morena (south), and Milton Street.
- Local Streets: are two lanes. The ROW for these roadways ranges from 52 feet to 92 feet and the design speed is typically 25 MPH. Local streets can include travel lanes, on-street parking (parallel or angled), parkways, and sidewalks.
    - The local streets are the majority of the roadways in the study area, and include all roadways not previously identified as collectors or major streets.

Figure 3-13 displays the classifications of the study area roadways based on existing conditions. Because classifications are categorized in even-numbered increments, some roadways with an odd-number of lanes/turn lanes are categorized by the lower even-numbered classification equivalent. Additional detail on classification and existing roadway geometry is provided in Section 5, Mobility.

Figure 3-14 displays the desired future classifications of study area roadways as indicated in the adopted Community Plans for both Linda Vista and Clairemont Mesa. This "adopted" roadway network largely maintains the existing classifications with the exception of Morena between Tecolote Road and the north split with West Morena (which adds a continuous turn lane) and Knoxville Street (which is extended to connect to West Morena and increases from local to a collector street).

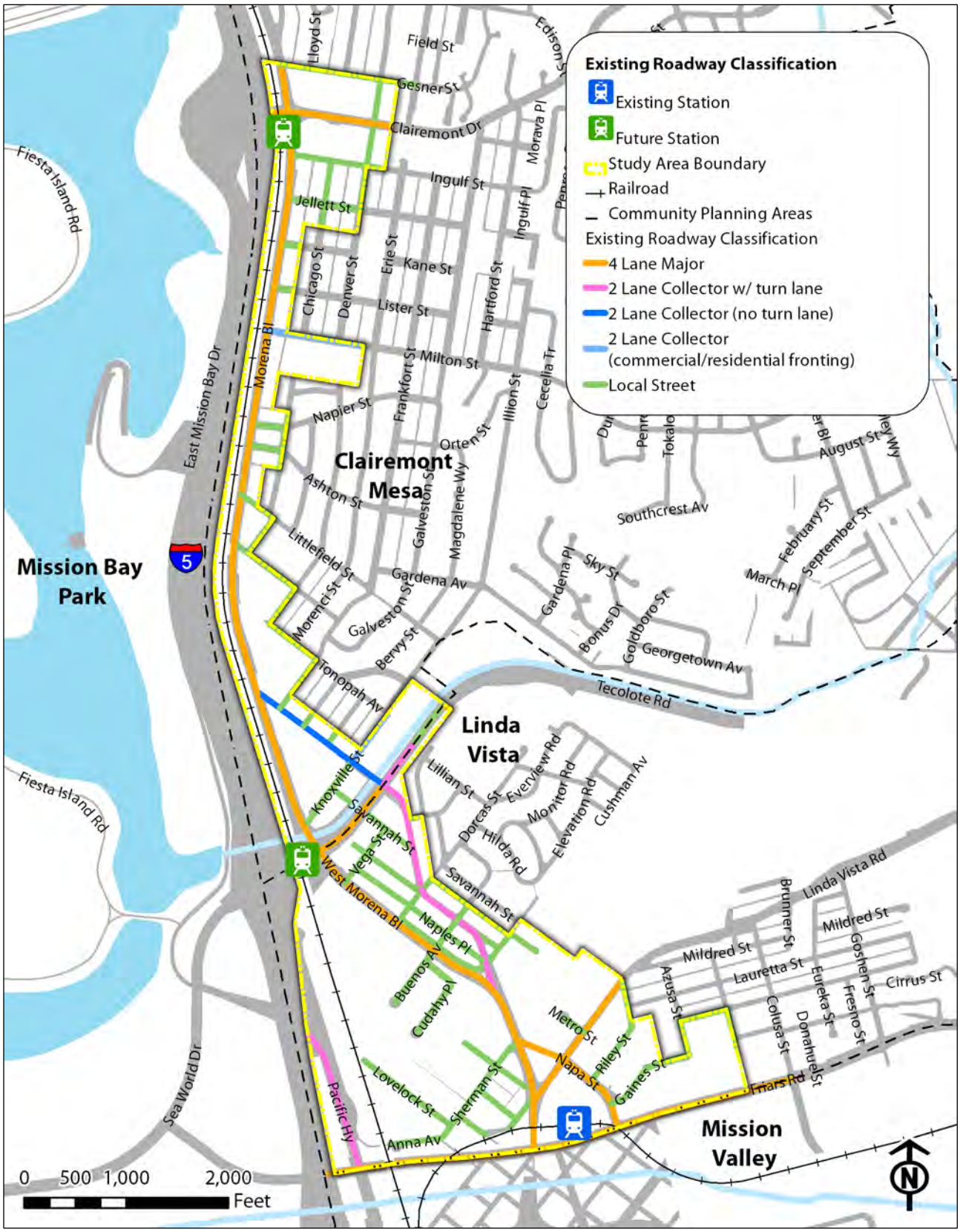


Figure 3-13: Existing Roadway Classification

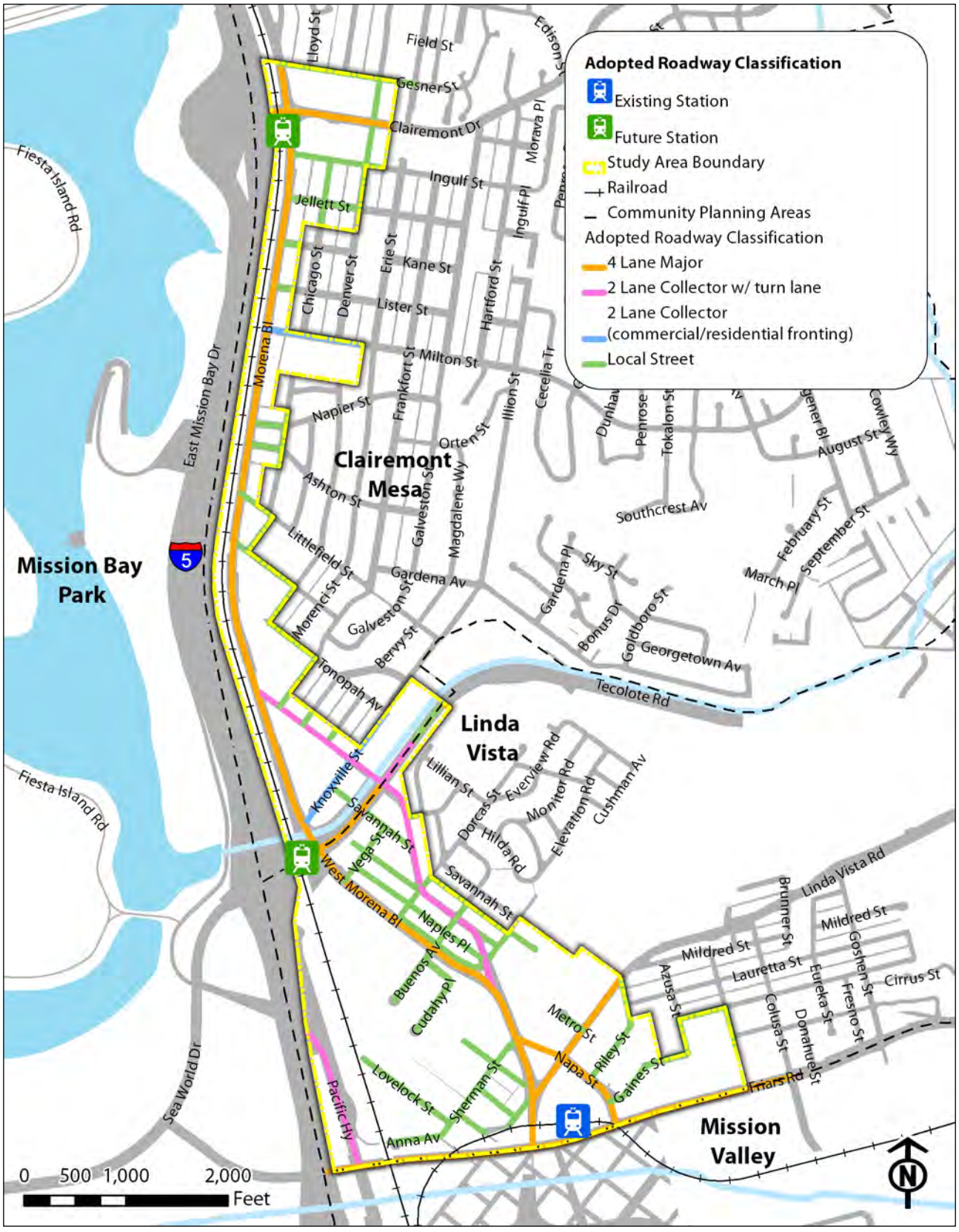


Figure 3-14: Adopted Roadway Classification

3.4 Overview of Transit Facilities

The study area is currently served by both light rail and bus transit systems (see Figure 3-15). The existing light rail service is limited to the existing Morena/Linda Vista station at the southern extent of the study area; further, the existing light rail system only serves areas to the east and south.

There are three bus routes which traverse the area (44, 50 and 105), providing stops along Morena Boulevard, Linda Vista Road, Milton Street, and Clairemont Drive. Bus stop facilities range from those with signage only to those with shelters. The majority of bus stops are signage only or signage with uncovered benches. Although Coaster service utilizes the railroad tracks at the western edge of the study area, the nearest station is in Old Town, south of Interstate 8.

The areas served by each of the bus routes listed above are described below:

- Route 44: Route 44 travels north from Old Town via Linda Vista road to serve areas of east Linda Vista and Clairemont, terminating its route at Clairemont Drive and Clairemont Mesa Boulevard, near Clairemont Square shopping center. Route 44 provides service seven days a week.

- Route 50: Route 50 is the University Town Center (UTC) Express, originating in downtown San Diego, running north on I-5 until Clairemont Drive, then continuing north on Genesee Avenue until it reaches the UTC Transit Center. Route 50 provides service Monday through Friday only.

- Route 105: Route 105 originates in Old Town and travels north via Morena Boulevard to Milton Street, where it heads east and connects to Clairemont Drive, then north to Clairemont Mesa Boulevard, Regents Road and Genesee Avenue, terminating at the UTC Transit Center. Route 105 provides service seven days a week.

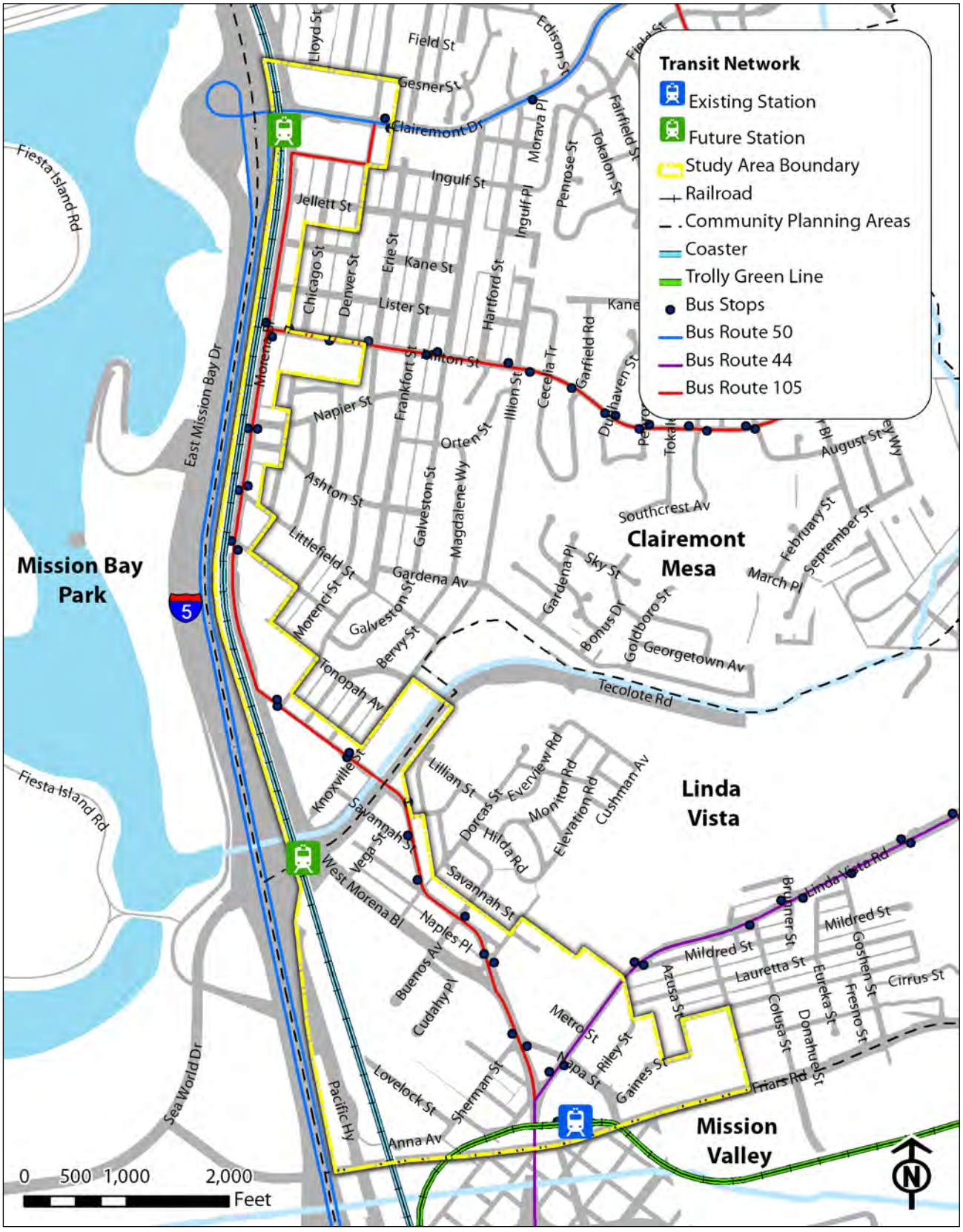


Figure 3-15: Transit Network

3.5 Natural Setting

The study area is almost entirely urban, and has been since the 1960s. While the landform of the area still influences circulation patterns and affects the urban form, little of the natural landscape remains. Two remaining vestiges of natural open space are Tecolote Canyon (east of the study area) and the Tecolote Creek wetlands at Mission Bay (west of the study area). Tecolote Canyon is unlikely to be impacted by changes within the study area given that is has protection as an identified natural resource park and is buffered by the Tecolote Canyon Recreation Center facilities on its western end. Tecolote Creek, as it runs through the study area, is already channelized and impacts beyond additional surface drainage into the creek are unlikely.

3.6 Man-Made Setting

Given the urban nature of the study area, the man-made environment is dynamic and diverse. The following sections discuss the considerations of the existing urban form, development characteristics, noise, air quality, and hazardous material.

3.6.1 Urban Form

The character of the study area can be expressed as the composite of a series of distinct elements that create a unique user experience. These elements include districts, corridors, edges, gateways, landmarks, and views/viewing locations. Figure 3-16 displays each of these elements and the sections below define each and how it shapes the study area.

Districts

Districts are contiguous sections of the city distinguished by some identity or character. The primary contributors to this character are likely the streets, sidewalks, public spaces, and buildings – the composite of all these elements represents a character that people define as a "place."

Although the study area is not very large, it still encompasses multiple mini-districts. The districts identified within the study area include:

- Gesner Apartments/Offices
- Bayview Plaza Empty Lot
- Ingulf/Denver Single Family/Multi-Family
- North Morena Connecting Commercial
- Milton Car Lot
- Ashton Neighborhood Commercial
- Morena Bend Multi-Family/RV Park
- North Morena Split Business Park/Light Industrial
- Knoxville RV Park
- Middle Morena Split Small Scale Auto-Oriented Horizontal Mixed Use
- West Morena Big Box
- W Morena Industrial
- Linda Vista Business Park
- Fast Food/Convenience Store Triangle
- Morena Station TOD
- Friars Road Police Station and Parking

Corridors

Corridors are linear districts: the streets, sidewalks, trails, and other channels in which people travel. Not all throughways are memorable or exhibit the character required to be classified a corridor, and thus, the study area has four distinguishing corridors:

Clairemont Mesa Drive (coming down off the mesa up to the crest over I-5)

The character of this corridor is largely defined by the views afforded toward Mission Bay when headed west. The buildings on either side of the roadway are varied, but the consistency of the roadway and street trees create a discernible character.

Morena Boulevard (between Tecolote Road and the south merge with West Morena Blvd.)

This portion of Morena Boulevard is defined by the relatively narrow width of the street, the mid-to-low density mix of uses along both sides of the street, and the presence of consistent sidewalks and bike lanes.

Linda Vista Road (northeast of Napa Street)

The portion of Linda Vista Road north of Napa Street is a short corridor, but derives its character from the commercial and business park uses along either side of the roadway and its role as a connector between the mesa and the Morena district below. In addition, this stretch of roadway offers one of the most dramatic views of the buildings of USD when traveling to the east.

Morena Boulevard (between Friars Road and the split with West Morena Blvd.)

Morena Boulevard between Friars and the split with West Morena Blvd. serves as a gateway corridor into the Morena District. While the uses on either side of the road vary greatly, the landscaping and streetscape of the corridor create an effective transition from Old Town/San Diego River crossing into the business/industrial environment of the study area.

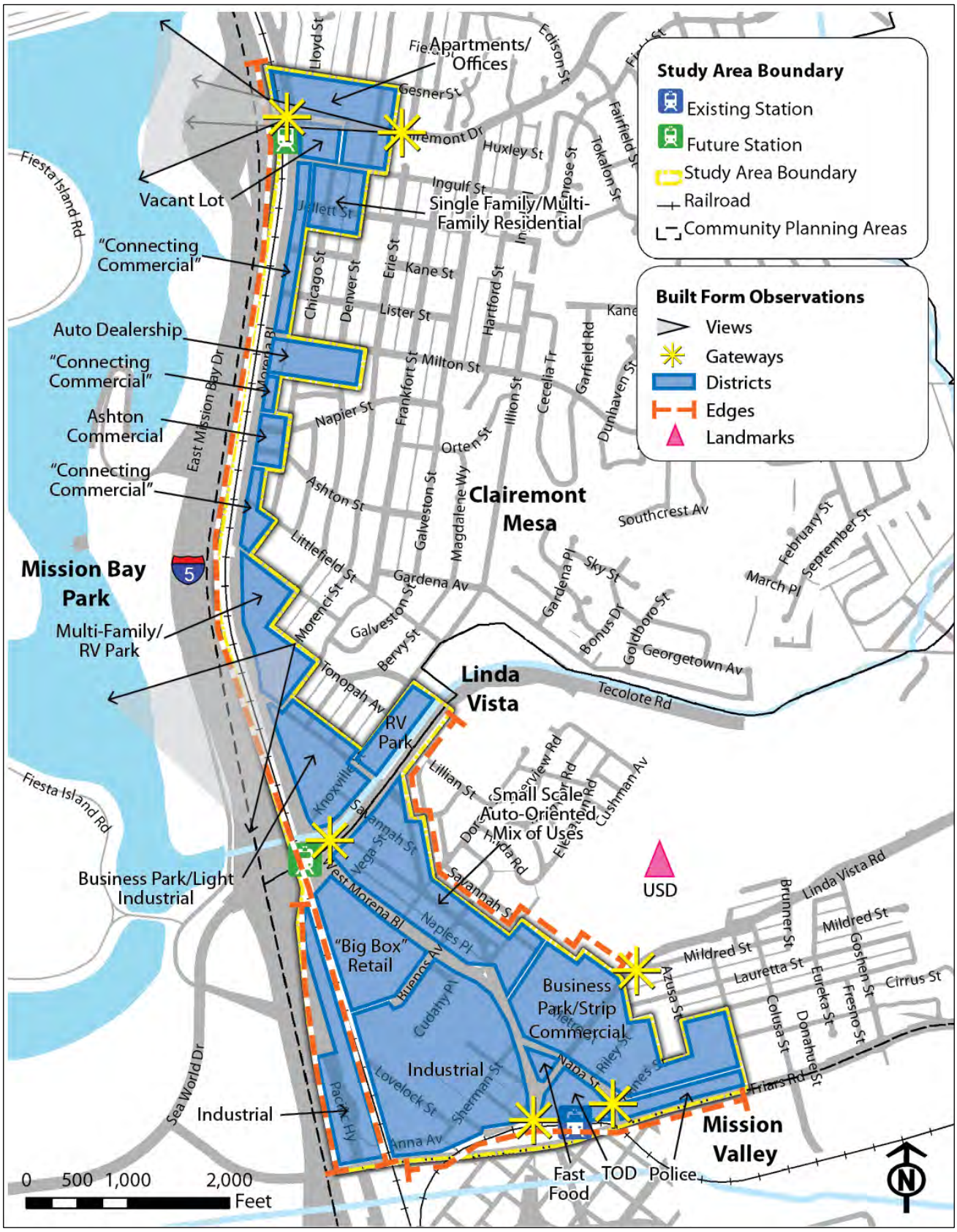


Figure 3-16: Built Form Observations

Edges

Edges are perceived boundaries which separate districts. Edges can take the form of walls, buildings, cliffs, shorelines, etc. The three most distinct edges within the study area are the railroad tracks at the western edge of the study area, the hills/cliffs northeast of Morena Boulevard, and Friars Road and the San Diego River at the southern edge of the study area. These edges converge at the southern extent of the study area and help to define circulation and land use patterns. They also have an isolating effect on this portion of the study area.

The northern portion of the study area in only constrained by the railroad tracks to the west; the landform to the east rises gently away from Morena Boulevard and transitions easily into the surrounding neighborhood.

Gateways

Gateways are entry/exit points to or from a district that are distinct and memorable. Gateways create the impression of moving from one character area to another. Because of the constrained nature of the study area, many of the entry/exit points are dramatic and serve well as gateways. The most memorable gateways include: Clairemont Drive at Denver Street, Clairemont Drive at I-5, Sea World/Tecolote Road at I-5, Linda Vista Road at Marian Way, and Morena north of Friars.

Landmarks

Landmarks are readily identifiable objects which serve as external reference points. The landform within the study area is relatively flat and the buildings have minor variation in scale (especially vertical scale), and thus, the study area has no significant landmarks. The most significant landmark is actually outside the study area: the buildings of USD, sited on top of the mesa. These buildings are visually prominent in the southern edge of the study area, although areas near and north of Tecolote Road have limited visibility of USD.

Landform and Topography

As mentioned in the discussion on edges and landmarks, much of the study area is flat. This area is the historic shoreline of Mission Bay, although it has been extended and backfilled to create land for the railroad tracks, freeway, and additional parkland within Mission Bay Park. The northern portion of the study area gently rises in elevation to the east, while the southern portion is defined by the mouth of Tecolote Canyon, the edge of the mesa, and the San Diego River.

Views

Views are visual corridors that frame a scene of interest or regional significance. Given the location of the study area, the most significant visual resource nearby is the water of Mission Bay. Although the study area lies extremely close to the Bay, its low elevation, combined with the interceding edges of the railroad tracks and I-5 freeway, prevent many views from within the study area. Areas that provide views to the Bay include: Clairemont Drive, Sea World Drive, theTecolote Road I-5 overpass, and to a lesser extent, Tonopah Avenue northwest of Frankfort Street.

3.6.2 Development Characteristics

The character of buildings within the study area influence the user experience. Characteristics such as study area development level, density, building heights, and floor area ratios (FARs) all contribute to influence how an individual feels about an area and how he or she moves through it.

For Figures 2-17 through 2-19, the information displayed is associated with residential or non-residential land uses, but not both. While some mixed use currently exists, these two groups are generally mutually exclusive in the study area's current state.

Development Level

As previously mentioned, the study area is completely urbanized and has been for many years. Its current level of development is typical of a commercial and industrial corridor that has seen more robust activity in the past, but still serves an important role in an increasing urbanized context. Because there has been limited new development in the area, some properties have become dilapidated, while other structures have been demolished, although fairly rare. While economic activity continues in the existing buildings, there is not sufficient demand to consolidate or densify properties within the corridor.

Current Densities

Figure 3-17 displays information on building density in terms of du/acre. Du/acre information is only available for residential and/or mixed use developments with residential uses. The residential properties are spread throughout the study area, although the majority are sited north of Tecolote Road. The figure also shows that density of du/acre varies greatly throughout the study area, with the lowest density residential occurring along Denver and Leita Streets and the highest density along Chicago Street, Morena Boulevard, and near the Morena/Linda Vista trolley station.

Current Building Heights

Building heights within the study area are fairly consistent. In an analysis of non-residential buildings, building heights range from one to four stories (see Figure 3-18). Most non-residential buildings are only one story, with only one being four stories. The analysis shows that although many lots are developed with structures, these structures maintain a very low profile.

Current Floor Area Ratios

The analysis of the FAR of non-residential buildings in the study area reveals that almost all lots have at least a 0.28 FAR, and that many have a 0.58 or higher FAR (see Figure 3-19). This is not surprising for many of the small lot retail/commercial properties that typically rely on limited parking and/or street parking for customers. It is surprising, however, that many of the large-lot commercial and industrial properties also remain above the 0.58 FAR. This indicates that even in this area of low building heights, lot coverage is higher, which implies there is less space between buildings and less surface area devoted to parking.

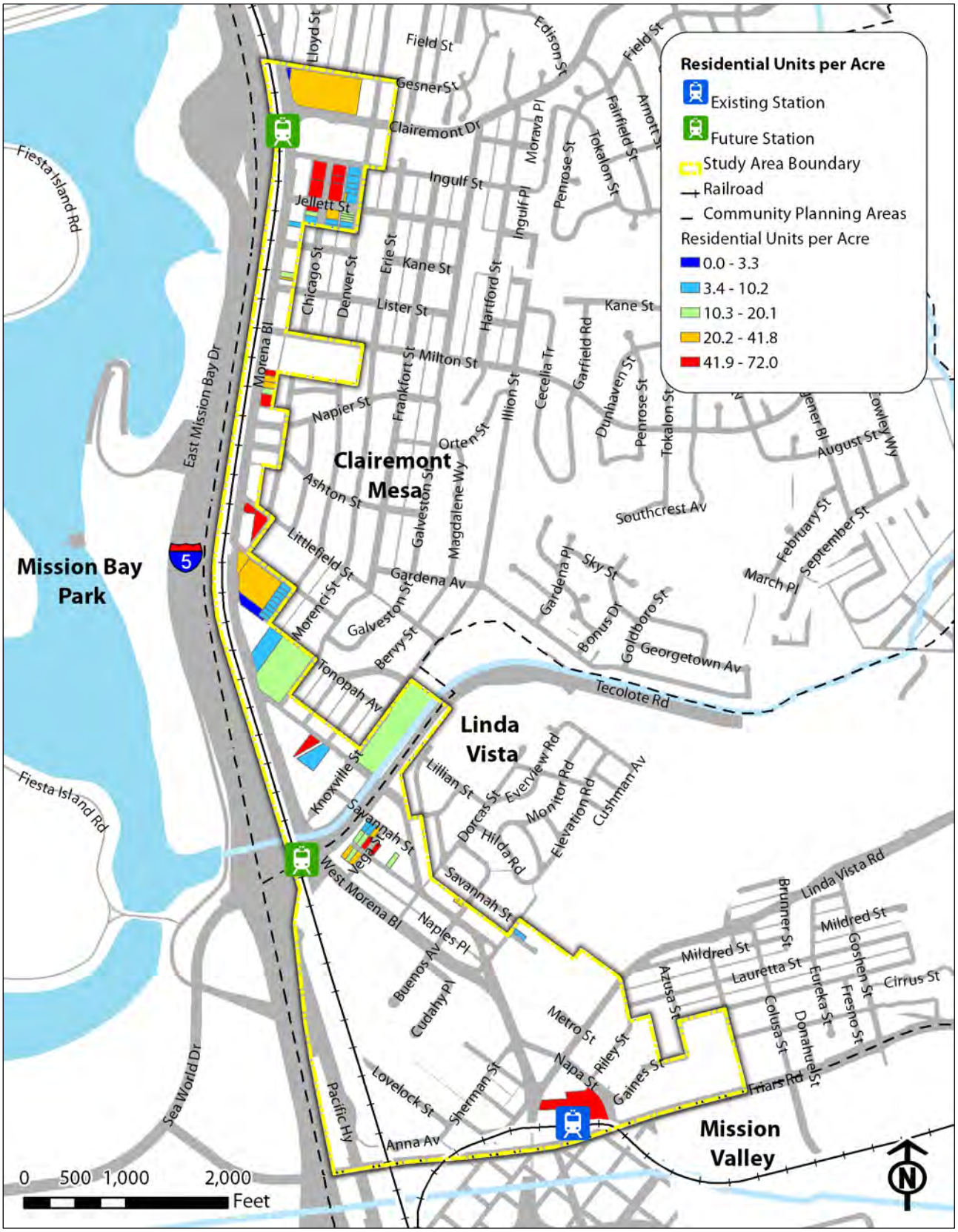


Figure 3-17: Residential Density

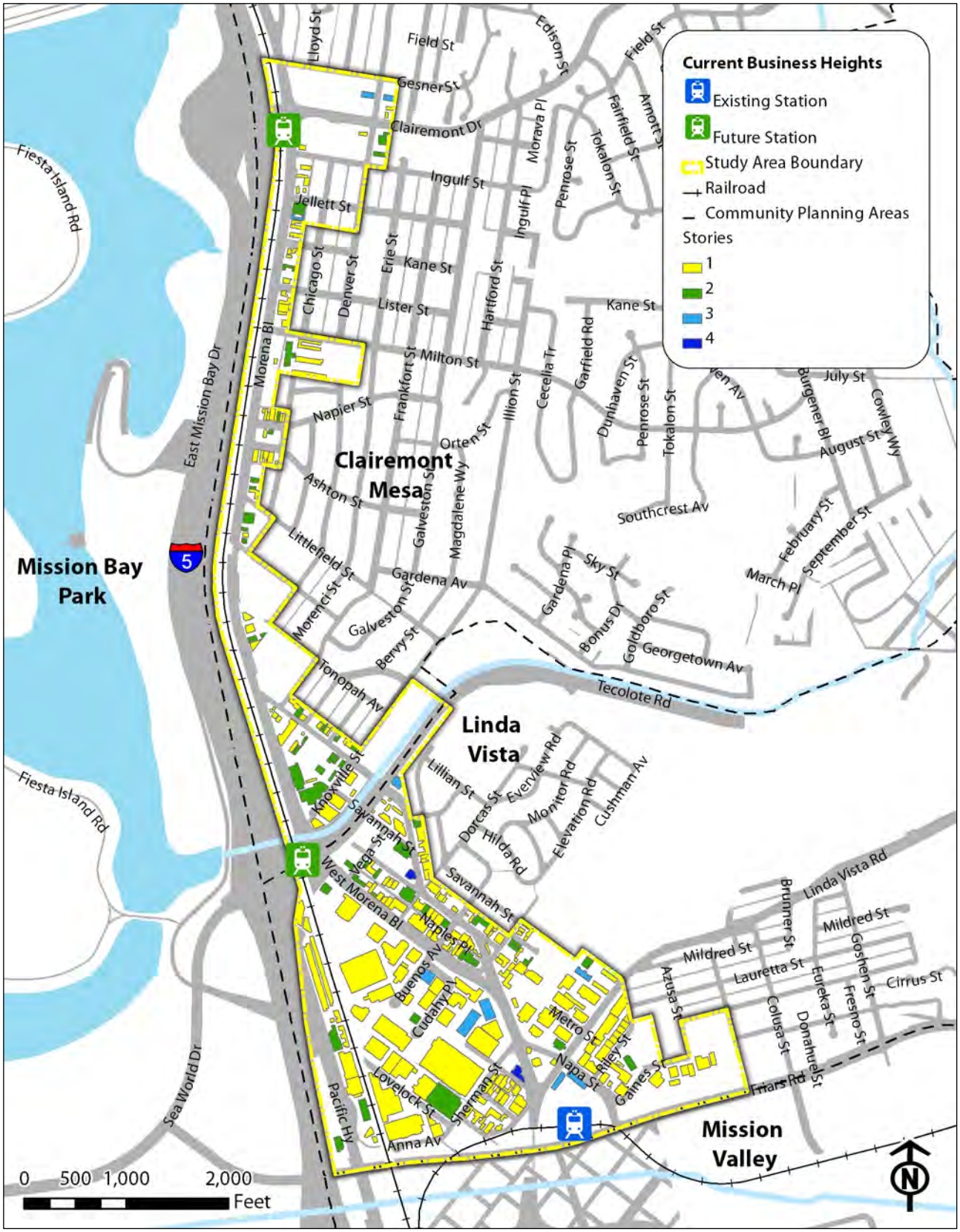


Figure 3-18: Non-Residential Heights

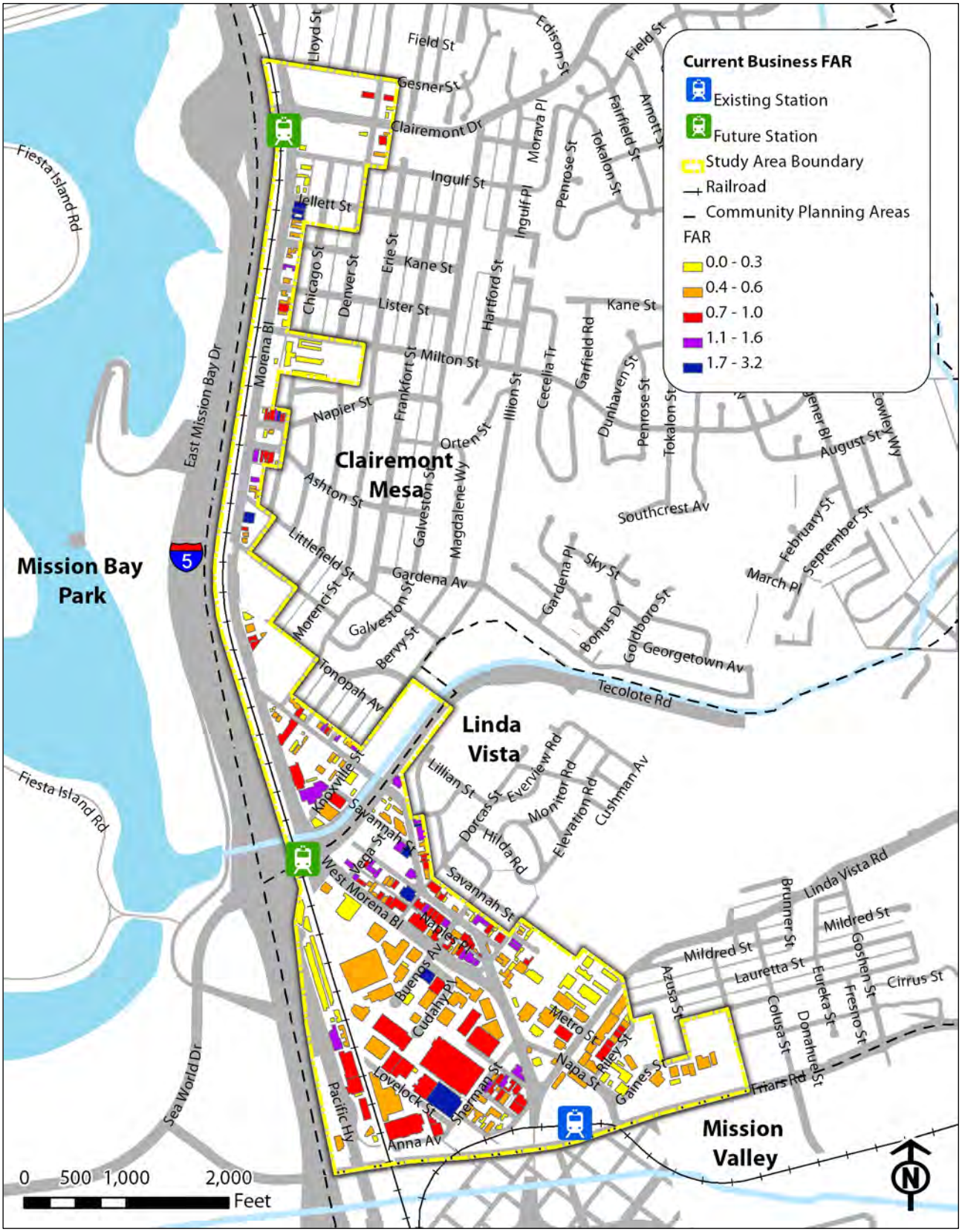


Figure 3-19: Non-Residential FAR

3.6.3 Noise Setting

Introduction

The following analysis is based on noise measurements conducted within the study area. It includes a discussion of existing acoustical setting of the area, applicable City of San Diego noise standards for various land zones in the area, and practical noise abatement measures for planning and rezoning purposes.

Existing noise sources of potential significance in the study area include vehicular traffic on the local circulation network, passenger and freight rail traffic, and industrial zones, which may impact properties in their immediate vicinity. Primary noise generators in the local circulation network are Interstate 5 (I-5) and Morena Boulevard.

Definitions

Sound is created upon an alteration in pressure, normally of air. It travels in waves. Its pressure level, energy level, intensity level, etc. can be measured. Sound level refers to Sound Pressure Level (SPL).

Noise is defined as unwanted or excessive sound. It is broadly recognized as a form of environmental degradation. Technically, noise and sound are similar and are often used interchangeably.

Noise abatement refers to the technology of controlling sound impacts to meet acceptable guidelines and regulations, consistent with economic and operational considerations.

Average or equivalent sound level (Leq) is the average sound measured during a specific period (e.g., Leqh refers to Hourly Average Sound Level).

Units of sound are expressed as Decibels (dB) and the "A"-weighted sound filter is often used in environmental impact analysis because it closely approximates perception of loudness by humans (dB-A).

Community Noise Equivalent Level (CNEL) is the time-weighted annual sound level. Time-weighting technique applies a penalty to hourly sound levels during certain periods of evening and/or nighttime hours. CNEL applies a 5 dB-A penalty to the evening hours of 7 pm to 10 pm, and a 10 dB-A penalty to the nighttime hours of 10 pm to the following 7 am. These time periods and penalties were selected to reflect people's sensitivity to sound as a function of activity.

Day-Night Equivalent Level (Ldn) is similar to CNEL except it does not apply the evening hours' penalty. Ldn and CNEL are often used interchangeably.

Applicable Standards

The Noise Element of the City of San Diego General Plan implements many regulations, plans, and studies adopted by the state, the Airport Land Use Commission, the military, and the City's Noise Ordinance. These guidelines and regulations are presented in Table 3-1 below.

Regulation	Description
Airport Noise Compatibility Planning (Code of Federal Regulations, Part 150)	Part 150 identifies compatible land uses with various levels of noise exposure to noise by individuals for local jurisdictions to use as guidelines, since the federal government does not have local land use control.
California Environmental Quality Act (CEQA)	CEQA considers exposure to excessive noise an environmental impact. Implementation of CEQA ensures that during the decision-making process stage of development, city officials and the public will be informed of any potentially excessive noise levels and available mitigation measures to reduce them to acceptable levels.
California Noise Insulation Standards (California Code of Regulations, Title 24)	Title 24 establishes an interior noise standard of 45-dBA for multiple unit and hotel/motel structures. Acoustical studies must be prepared for proposed multiple unit residential and hotel/motel structure within the Community Noise Equivalent (CNEL) noise contours of 60-dBA or greater. The studies must demonstrate that the design of the building will reduce interior noise to 45-dBA CNEL or lower.
California Airport Noise Standards (California Code of Regulations, Title 21)	Title 21 establishes that the 65-dBA CNEL is the acceptable level of aircraft noise for persons living near an airport.
Air Installations Compatible Use Zones (AICUZ) Study (US Department of Defense)	The AICUZ study establishes land use strategies and noise and safety criteria to prevent encroachment of incompatible land use from degrading the operational capability of military air installations
Airport Land Use Compatibility Plans (ALUCP)	The ALCUPs promote compatibility between airports and the land uses that surround them to the extent that these areas are not already devoted to incompatible land uses. The city is required to modify its land use plans and ordinances to be consistent with the ALUCPs or to take steps to overrule the Airport Land Use Commission (ALUC).
The City of San Diego Noise Abatement and Control Ordinance (Municipal Code Section 59.5.0101 et seq.)	Provides controls for excessive and annoying noise from sources such as refuse vehicles, parking lot sweepers, watercraft, animals, leaf blowers, alarms, loud music, and construction activities.

Table 3-1: General Plan Noise Regulations

Exterior Noise Limits:

The City of San Diego has established a set of community noise standards which identify compatible outdoor and indoor sound level limits for various types of land uses (Table 3-2). As presented in Table 3-2, the maximum compatible exterior sound level for residential land uses is 65 dB-A CNEL.

Additionally, the City of San Diego, per State of California Administrative Code (Title 25), requires new attached residential/hotel structures to be located within an exterior noise environment of 60 dB-A CNEL or lower. If the exterior noise level exceeds the maximum compatible levels, measures should be examined to reduce such impacts to below a level of significance at the project site. Acoustical treatment measures for reduction of exterior noise levels are provided later in this section.

Interior Noise Limits:

If exterior noise levels cannot be reduced to acceptable levels by practical means, specific design and construction techniques must be incorporated to reduce the interior noise levels to below 45 dB-A CNEL. Acoustical treatment measures for reduction of interior noise levels are included later in this section

Existing Acoustical Setting

The following analysis is based on short-term and long-term (24-hour) sound surveys conducted within the study area (see Figure 3-20 for monitoring locations). As a part of this study, seven short-term sound surveys were conducted at selected locations on February 12 and 13, 2013. Results of measurements are presented in Table 3-3 below. Table 3-3 also includes results of three surveys (i.e., Surveys 8-10) conducted within the study area as part of Mid-Coast Corridor Transit Project.

Existing ambient sound levels within the Morena Boulevard Station study area range from between 55 and 75 dB-A Ldn. Sound levels are highest at land uses abutting Morena Boulevard and lowest along the eastern boundary of the study area.

CITY OF SAN DIEGO LAND USE – NOISE CONPATIBILITY GUIDELINE						
Land Use Category	**Exterior Noise Exposure (dBA CNEL)**					
	60	**65**	**70**	**75**		
Open Space and Parks and Recreational						
Community & Neighborhood Parks; Passive Recreation						
Regional Parks; Outdoor Spectator Sports, Golf Courses; Athletic Fields; Outdoor Spectator Sports, Water Recreational Facilities; Horse Stables; Park Maint. Facilities						
Agricultural						
Crop Raising & Farming; Aquaculture, Dairies; Horticulture Nurseries & Greenhouses; Animal Raising, Maintain & Keeping; Commercial Stables						
Residential						
Single Units; Mobile Homes; Senior Housing		45				
Multiple Units; Mixed-Use Commercial/Residential; Live Work; Group Living Accommodations **For uses affected by aircraft noise, refer to Policies NE-D.2. & NE-D.3.*		45	45			
Institutional						
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through G-12 Educational Facilities; Libraries; Museums; Places of Worship; Child Care Facilities		45				
Vocational or Professional Educational Facilities; Higher Education Institution Facilities (Community or Junior Colleges, Colleges, or Universities)		45	45			
Cemeteries						
Sales						
Building Supplies/Equipment; Food, Beverages & Groceries; Pets & Pet Supplies; Sundries, Pharmaceutical, & Convenience Sales; Wearing Apparel & Accessories			50	50		
Commercial Services						
Building Services; Business Support; Eating & Drinking; Financial Institutions; Assembly & Entertainment; Radio & Television Studios; Golf Course Support			50	50		
Visitor Accommodations		45	45	45		
Offices						
Business & Professional; Government; Medical, Dental & Health Practitioner; Regional & Corporate Headquarters			50	50		
Vehicle and Vehicular Equipment Sales and Services Use						
Commercial or Personal Vehicle Repair & Maintenance; Commercial or Personal Vehicle Sales & Rentals; Vehicle Equipment & Supplies Sales & Rentals; Vehicle Parking						
Wholesale, Distribution, Storage Use Category						
Equipment & Materials Storage Yards; Moving & Storage Facilities; Warehouse; Wholesale Distribution						
Industrial						
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking & Transportation Terminals; Mining & Extractive Industries						
Research & Development				50		

	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level. Refer to Section I.
		Outdoor Uses	Activities associated with the land use may be carried out.
	Conditionally Compatible	Indoor Uses	Building Structure must attenuate exterior noise to the indoor noise level indicated by the number for occupied areas. Refer to Section I.
		Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable. Refer to Section I.
	Incompatible	Indoor Uses	New construction should not be undertaken.
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.

Table 3-2: Noise Compatibility Guidelines

Figure 3-20: Sound Monitoring Locations

RESULTS OF AMBIENT SOUND MEASUREMENTS					
	Site	Location	Start Date	Start Time	Leq (dBA)
1	L-1	Station #2, north of Armstrong Nursery	2/12/13	7:06	65
2	L-2	Tecolote Rd, East at The Tennis Club	2/12/13	8:15	59
3	L-3	Buenos Avenue – west end	2/12/13	16:33	63
4	L-4	West of Buenos Avenue, at 60' from tracks	2/12/13	17:37	69
5	L-5	Metro Ct.	2/13/13	7:32	63
6	L-6	Corner of Napa St. & Friars Rd. at The Village	2/13/13	16:30	68
7	L-7	Coastal Trailer Villa, at 20' of Morena Blvd	2/13/13	17:46	72
8	ST-2	Fashion Career College	3/9/11	13:00	73
9	LT-3	Fashion Career College Student Housing	3/9/11	15:00	72
10	LT-4	2446 Denver Street	3/7/11	14:30	57

Notes:

- Refer to Figure 3-19 for survey locations.
- All surveys were short-term except for 9 and 10 which were 24-hour surveys.

Table 3-3: Ambient Air Sound Measurements

Typical Sound Attenuation Methods

Noise impacts can typically be abated by four basic methods:

1. Reducing the sound level of the noise generator.
2. Interrupting the noise path between the source and receiver.
3. Increasing the distance between the source and receiver.
4. Insulating the receiver (building material and construction methods).

All of these methods help to reduce interior noise levels, but only the first three help to reduce outside noise levels with the exception of aircraft noise.

Reducing the Source Noise:

Although the City has little direct control over noise produced by vehicles, the most efficient and effective means of abating noise from transportation systems is to reduce the noise at the source. Noise generated by aircraft, motor vehicles, and trains, for example, may be abated through improved engine design. Structure, vehicle, engine design or the use of mufflers may successfully quiet certain noise sources.

Traffic calming and traffic management techniques and the use of low-noise road pavement surfaces can help to reduce traffic noise from motor vehicles.

Noise generated by land uses, such as industrial uses, may be abated through site design, structure design and construction, quieter machinery, and the limiting of noise-producing operations. This method most directly assigns the responsibility to the generator of the noise.

Interrupting the Noise Path:

Strategically placing walls and/or landscaped berms, utilizing natural land and/or built forms or a combination of two or more of these methods between the noise source and the receptor may minimize noise. Generally, effective noise shielding requires a continuous, solid barrier with a mass which is large enough to block the line of sight between source and receiver. Variations may be appropriate in individual cases based on distance, nature, and orientation of buildings behind the barrier, and a number of other factors. Garages or other structures can help to shield residential units and outdoor living areas from non-aircraft noise. The shape and orientation of buildings can also help to avoid reflecting the noise from a building surface to adjacent noise sensitive buildings. Sound walls are the least preferable method due to the aesthetic concerns.

Separating the Noise Source:

Spatial separation or isolation of the noise source from the potential receiver may minimize the effects of noise. Site planning techniques that incorporate spatial buffers along freeways, for example, may reduce the noise level affecting adjacent noise-sensitive land uses. Developing noise-compatible commercial or industrial uses in these buffer areas may also help to interrupt the noise path.

Insulating the Noise Receiver:

Acoustical structures, enclosures, or construction techniques can help to abate the noise problem by insulating the receiver. The proper design and construction of buildings can help to reduce interior noise levels. Nearby noise sources should be recognized in

determining the location of doors, windows, and vent openings. Sound-rated windows (extra thick or multi-paned), doors, wall construction materials, and insulation are also effective as specified in CCR Title 24 in reducing interior noise levels. The difference in sound (noise) levels from the exterior to the interior of a structure indicates the sound transmitted loss through the window, door, or wall.

A Sound Transmission Class (STC) rating specifies the noise level reduction that windows, doors, wall construction materials, and insulation provide. For example, if the exterior of a structure is exposed to 75 dBA and 45 dBA is measured on the interior of the structure, then a reduction of 30 dBA is achieved. Typically, higher STC ratings indicate greater interior noise reductions.

The use of proper construction methods should make certain that doors and windows are fitted properly, openings sealed, joints caulked, and plumbing constructed to ensure adequate insulation from structural members. Sound-rated doors and windows will have little effect if left open. This may require installation of air conditioning for adequate ventilation. Table 3-2 indicates the acceptable interior noise level for land use types.

3.6.4 Air Quality Setting

Overview

Definitions/Air Quality Background

PM_{10} (particulate matter less than 10 microns) is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM_{10} also causes visibility reduction and is a criteria air pollutant.

$PM_{2.5}$ (particulate matter less than 2.5 microns) is a similar air pollutant to PM_{10}, consisting of tiny solid or liquid particles which are 2.5 microns or smaller (often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from sulfur dioxide (SO_2) release from power plants and industrial facilities and nitrates formed from nitric oxide/nitrogen dioxide (NO_X) release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.

A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks, and number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life span, and increased mortality from lung cancer.

Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show

lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.

Ozone (O_3), or smog, is a highly reactive and unstable gas formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

San Diego Air Quality Setting

The climate in the San Diego Air Basin (SDAB) is controlled by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast experience moderate temperatures and comfortable humidity. Precipitation is limited to a few storms during the winter season and the overall climate is characterized by hot, dry summers and mild winters.

Because of the atmospheric conditions present in and around the study area, general air quality is considered acceptable. Primary air emission sources of concern within the study area include the I-5 freeway and congested intersections. Freeway emissions are largely dissipated by atmospheric elements and congested intersections (as defined as Level of Service (LOS) E or F) only occur once within the study area based on existing peak hour approach volumes (See Section 5, Mobility for full traffic analysis). A mitigating factor in the LOS E intersection is the relatively low throughput of vehicles, indicating the issue is likely a street design/signal timing issue rather than a surplus of polluting vehicles. A tertiary air emission concern is stationary sources, although none have been identified in or near the study area.

In all, the following resources were reviewed for guidelines related to air quality and identification of potential emission sources:

1. City of San Diego General Plan: City of Villages, 2008.
2. General Plan Program EIR, SCH 2006091032, September 28, 2007.
3. Clairemont Mesa Community Plan, Adopted April 1989, last updated April 2011.
4. Linda Vista Community Plan and Local Coastal Program Land Use Program,: “A Community of Neighbors…”, Adopted September 1998, last updated April 2011.
5. Air Quality and Land Use Handbook: A Community Health Perspective: April 2005, California Air Resources Board.
6. California Environmental Quality Act: Significance Determination Thresholds, City of San Diego Development Services Department, 2011.
7. City of San Diego Land Development Manual.
8. 2011 Air Toxics "Hot Spots", Program Report for San Diego County, December 5, 2012, San Diego County Air Pollution Control District.

9. San Diego International Airport Land Use Compatibility Plan, Steering Committee Report 5, Safety Compatibility Factor, September, 2011.

The SDAB is currently considered to be a basic non-attainment area for the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for O_3, with three exceedances of the 8-hour federal standard and one exceedance of the 1-hour state standard in 2007; three exceedances of the 8-hour federal standard and two exceedances of the 1-hour state standard in 2008; and one exceedance of both the 8-hour federal standard and 1-hour state standard in 2009. The SDAB is also classified as a nonattainment area for the CAAQS for $PM_{2.5}$, and PM_{10}; no exceedances of the state or federal standards were recorded between 2007 and 2009. The SDAB is classified as an attainment or unclassified area for all other pollutants. Table 3-4 displays the air quality standards and measurements for the SDAB for years 2008-2011.

Pollutant	Standard	Year		
		2008	2009	2010
Ozone (O_3)				
Maximum 1-Hour Concentration (ppm)	–	0.11	0.10	0.10
Maximum 8-Hour Concentration (ppm)	–	0.09	0.08	0.08
Number of Days Exceeding State 1-Hour Standard	>0.09 ppm	3	2	1
Number of Days Exceeding State 8-Hour Standard	>0.07 ppm	10	4	6
Number of Days Exceeding Federal 8-Hour Standard	>0.075 ppm	5	2	3
Number of Days Exceeding Health Advisory	≥0.15 ppm	0	0	0
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)	–	5.6	4.4	3.9
Maximum 8-Hour Concentration (ppm)	–	2.8	3.4	2.5
Number of Days Exceeding Federal / State 8-Hour Standard	>9.0 ppm	0	0	0
Number of Days Exceeding State 1-Hour Standard	>20 ppm	0	0	0
Number of Days Exceeding State 1-Hour Standard	>35 ppm	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-Hour Concentration (ppm)	–	0.063	0.054	0.058
Annual Arithmetic Mean Concentration (ppm)	–	0.016	0.014	0.013
Number of Days Exceeding State 1-Hour Standard	>0.18 ppm	0	0	0
Respirable Particulate Matter (PM_{10})				
Maximum 24-Hour Concentration ($\mu g/m^3$)	–	158	126	108
Annual Arithmetic Mean ($\mu g/m^3$)	–	26.8	25.1	21.1
Fine Particulate Matter ($PM_{2.5}$)				
Maximum 24-Hour Concentration ($\mu g/m^3$)	–	30	56	27
Annual Arithmetic Mean ($\mu g/m^3$)	–	13.3	12.1	10.8

Table 3-4: Air Pollution Standards and Measurements 2008-2010

Sensitive Receptors

"The San Diego Air Pollution Control District (APCD) identifies sensitive receptors as populations that are more susceptible to the effects of air pollution than the general population. Sensitive receptors located in or near the vicinity of known air emission sources, including freeways and congested intersections, are of particular concern. Sensitive receptors are located throughout the study area and include, but are not limited to, the following: hospitals, libraries, child care centers, adult assisted care facilities, and schools. Land use compatibility issues relative to siting of pollution-emitting uses or siting of sensitive receptors must be considered." (General Plan EIR)

Some of the sensitive receptors are mapped, however, because many change location, a determination of proximity may be necessary for projects that are anticipated to generate significant $PM_{2.5}$ or PM_{10} (Adult Day Care, State Licensed Child Care, State Licensed Group Homes). The determination of sensitive receptors is a part of any health risk assessment or air quality report conducted for new development of any significant size.

Relevant General and Community Plan Air Quality Policies

Air quality is regulated through a variety of permits and oversight by local and state agencies. The City has development standards that mandate best management practices (BMP) for construction. The BMPs are updated as state and federal regulations change. Often BMPs applied to address one environmental issue, e.g. protection to reduce erosion and runoff during construction to preserve water quality and address air quality by reducing the potential for wind erosion.

The following policies are referenced in the General Plan EIR as directly reducing the air quality impact of the General Plan.

General Plan

CE-F.1 Develop and adopt a fuel efficiency policy to reduce fossil fuel use by City departments, and support community outreach efforts to achieve similar goals in the community.

CE-F.2 Continue to upgrade energy conservation in City buildings and support community outreach efforts to achieve similar goals in the community.

CE-F.3 Continue to use methane as an energy source from inactive and closed landfills.

CE-F.4 Preserve and plant trees, and vegetation that are consistent with habitat and water conservation policies and that absorb carbon dioxide and pollutants.

CE-F.5 Promote technological innovations to help reduce automobile, truck and other motorized equipment emissions.

CE-F.6 Encourage and provide incentives for the use of alternatives to single-occupancy vehicle use, including using public transit, carpooling, vanpooling, teleworking, bicycling and walking. Continue to implement programs to provide City employees with incentives for the use of alternatives to single-occupancy vehicles.

CE-F.7 Influence the development of state, federal, and local actions to increase the use of alternative fuels.

CE-F.8 Influence the development of state, federal and local efforts to increase fuel efficiency and reduce greenhouse gas emissions.

CE-F.9 Prohibit the idling of motive equipment (vehicles and equipment using fossil fuels) that is owned or leased by the City and operated by City employees unless mission necessary.

Clairemont Mesa Community Plan
None

Linda Vista Community Plan
None

Design Considerations from Other Sources
In 2005, the California Air Resources Board provided guidance on the placement of new uses near sources of diesel particulates. The recommendations in the *Air Quality and Land Use Handbook,* are based on health risk assessment calculations for sensitive receptors near PM generating uses. The following are design recommendations from the *Handbook.*

California Air Resources Board:

- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
- New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;
- Projects affecting intersections that are at LOS D, E, or F with a significant number of diesel vehicles, or those that would change to LOS D, E, or F, because of increased traffic volumes from a significant number of diesel vehicles related to the project;
- New or expanded bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location; or
- Projects in or affecting locations, areas, or categories of sites that are identified in the PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.
- Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

Summary
The study area, and the San Diego region in general, is fortunate in that is has a geographical setting and atmospheric conditions that foster good air quality. Further, the study area currently lacks either stationary or vehicular sources of concern which would impact sensitive receptors, allowing for great flexibility in the siting of all land uses/types of facilities. In the future, it is unlikely that new stationary sources of emissions would be allowed to develop in the study area, and ideally, roadway traffic volume increases would be minimized through the development of alternative modes of transportation (such as the proposed extension of LRT service). Even if future traffic causes additional intersections to reach a failing LOS, the standard approach of increasing distance between the intersection and sensitive receptor sites will have to be weighed against the benefits of mixed land uses and accessibility through close proximity to transit services (including intersection bus stops).

3.6.5 Hazardous Material Setting

Introduction and Methodology

Environmental reconnaissance was conducted for the study area in order to identify environmental conditions that might impact land use decisions as well as conditions that might be encountered during construction. The basis of information for this report was produced by Environmental Data Resources (EDR). This basis includes a database radius map report, a city directory search, historical topographical maps, a Sanborn map search, and historical aerial photos. The full hazardous material report is provided as an appendix to this report.

Summary of Results

Database Radius Map Report

Overall, the radius map report generated over 2,200 environmental records within a 3-mile radius. However, a majority of these results are not relevant because they are located in areas that pose no impact on the study area. Sites identified south of the San Diego River, in Mission Bay to the west, and Mission Beach to the northwest were removed from consideration for this report. The general groundwater flow direction is anticipated to be from east to west, so properties to the east of the study area up to one mile were included for initial review.

After applying the above limitations, the database contained 352 records within the study area to be reviewed, and only 34 of these were deemed to be records of concern. These 34 records pertained to 20 different properties within the study area. In addition, another 91 records were found for properties in the vicinity of the study area. Depending on available information about groundwater flow directions as well as the potential for fate and transport of contaminants, these nearby sites may be a concern. See the hazardous materials appendix for full information on sites and site information.

Figure 3-21 displays the location of the sites of concern, those of potential concern, and those analyzed, but determined to not be of concern. The sites of concern are fairly evenly distributed throughout the study area. Of the three LRT station sites, the highest number of sites of concern occur near the existing Morena/Linda Vista station, followed by the proposed Clairemont Station, and lastly, the proposed Tecolote/Sea World Drive station. The proposed Tecolote/Sea World Drive station has almost no sites of concern in its immediate vicinity.

Topographical Maps

For the study area, one of the most significant changes observed on these maps is the development of the Cudahy Slough. This feature is identified in the 1953 map at the southeast corner of the study area, but it is shown as developed in 1967. These maps also show a significant progression of development of Mission Bay, just west of the study area.

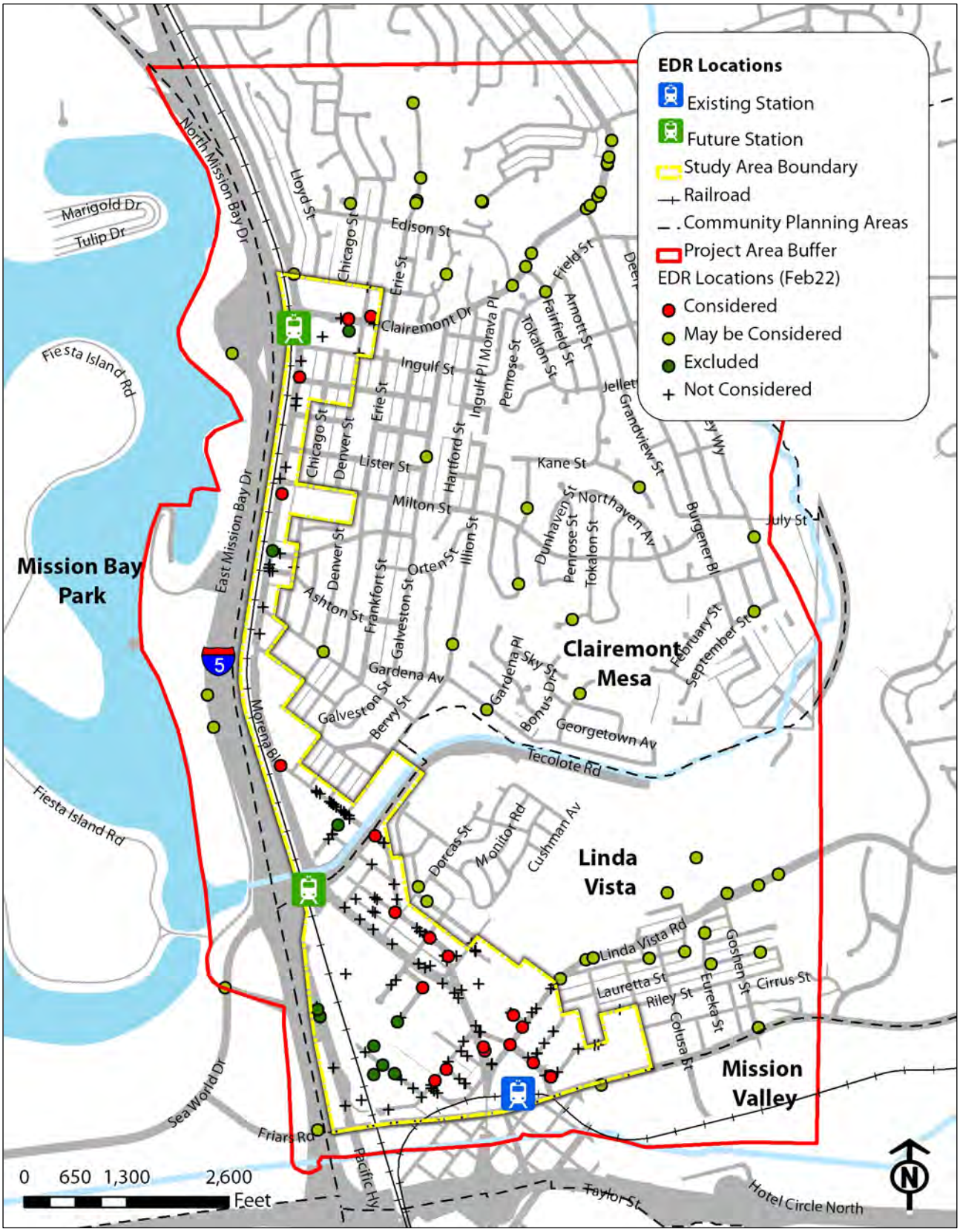


Figure 3-21: Environmental Sites of Concern

3.7 Planning Analysis

The regulatory environment of the study area includes the City of San Diego's currently adopted plans, including the General Plan, community plans, and zoning ordinance/municipal code. These documents not only affect current growth and development, but future development as well.

3.7.1 Adopted Plans

The following discussion provides information from the City's General Plan, Clairemont Mesa Community Plan, Linda Vista Community Plan, and the City's Zoning Ordinance.

3.7.2 San Diego General Plan

The General Plan is the document which provides a vision for the next 20-30 years of growth within the City. It develops goals for both the entire City and communities within the City through establishing goals, objectives, and policies. Below is information on the items which influence development of TOD and other planning scenarios similar to those present in the study area.

General Plan Guiding Strategy: "City of Villages"

The General Plan has adopted a "City of Villages" guiding strategy with the goal of locating mixed-use villages throughout the City and connecting them by high quality transit. These villages will be pedestrian-friendly activity centers at the heart of each community. Villages are characterized by accessible and attractive streets and public spaces. The design of each village will be unique to the community in which it is located. Three of the village prototypes are applicable to the study area and are discussed below. Table 3-1 describes and provides information on the land uses utilized in the General Plan and Community Plans.

Neighborhood Village Center

The Clairemont station area, and areas along Tecolote Rd and West Morena, north of the Tecolote Station are identified as a Neighborhood Village Center village type:

> "…neighborhood-oriented areas with local commercial, office, and multifamily residential uses, including some structures with office or residential space above commercial space. Village Centers will contain public gathering spaces and/or civic uses. Uses will be integrated to the maximum extent possible in order to encourage a pedestrian-oriented design and encourage transit ridership. Neighborhood Village Centers range in size from just a few acres to more than 100 acres."

Transit Corridor

The Morena Blvd corridor between the Clairemont and Tecolote stations is identified as a Transit Corridor village type:

> "The City contains commercial corridors that are lively and vital; pedestrian-friendly; home to a rich variety of small businesses, restaurants, and homes; and served by higher frequency transit service. Transit corridors provide valuable new housing opportunities with fewer impacts to the regional freeway system because of their available transit service. Some corridors would benefit from revitalization."

Urban Village Center

A large area surrounding Morena station and to the north, is identified as an Urban Village Center village type:

> "Urban Village Centers are higher-density/intensity areas located in sub-regional employment districts. They are characterized by a cluster of more intensive employment, residential, regional and sub-regional commercial uses that maximize walkability and support transit."

General Plan Land Use	Community Plan Land Use	Description	General Plan Intensity/Density Range
Residential	Residential - Low	Provides for single-family housing within the lowest-density range.	5 - 9 du/acre
	Residential - Medium	Provides for both single and multifamily housing within a medium-density range.	15 - 29 du/ac
Commercial, Employment, Retail and Services	Neighborhood Commercial	Provides local convenience shopping, civic uses, and services serving an approximate three mile radius.	0 - 44 du/ac (if residential permitted)
	Community Commercial	Provides for shopping areas with retail, service, civic, and office uses for the community at large within three to six miles. It can also be applied to Transit Corridors where multifamily residential uses could be added to enhance the viability of existing commercial uses.	0 - 74 du/ac (if residential permitted)
Industrial Employment	Light Industrial	Allows a wider variety of industrial uses by permitting a full range of light manufacturing and research and development uses and adding other industrial uses such as warehousing, storage, wholesale distribution and transportation terminals. Multi-tenant industrial uses and corporate headquarters office uses are permitted.	N/A

Table 3-1: General Plan and Community Plan Land Uses

Summary of Supporting General Plan Policies

General Plan policies support the revitalization of transit corridors to allow higher intensity mixed-use development. Transit corridors support a mix of employment, commercial and higher density residential uses, and will provide public gathering spaces. Policies support building design and streetscape improvements that enhance or maintain a "Main Street" character along transit corridors. Policies support the General Plan "City of Villages" concept and allow for flexibility of each village to serve the functions and preferences of the community it serves. The mix of uses at each village will be determined at the community plan level based on the needs of that community and the role the village plays in the region and city. See summaries of relevant community plans below.

3.7.3 Community Plans

Clairemont Mesa Community Plan (Adopted 1989)

Project Area Existing Conditions Overview

- Commercial strip development
- Uses in this area include offices, mini-markets, restaurants, car sales and residential development
- Poor connectivity
- In need of beautification: more landscaping, new signage

Project Area Vision

- Retail and commercial corridor with professional offices
- Enhanced pedestrian linkages and streetscape environment: wider sidewalks, new landscaping, attractive signage, minimize curb cuts
- Create unifying theme
- Improve mobility and linkages for all transportation modes throughout the project area
- Amenities at the LRT station, such as shelters, benches, bike racks, route maps, schedules and landscaping
- Intensification of vacant site adjacent to the LRT station (West Clairemont Plaza)
- Direct access from Morena Blvd to I-5
- Undergrounded utilities along major transportation corridors

Relevant Objectives for Commercial Development

- Require commercial areas to incorporate landscaping which will help to integrate the commercial development into the surrounding neighborhood.
- Design commercial areas to best utilize the existing transportation system and provide pedestrian linkages to and within commercial development as well as connections to adjacent uses.
- Maintain commercial uses in neighborhood commercial centers.
- Revitalize the commercial area along the southern portion of Morena Boulevard and improve both vehicular and pedestrian access along the Boulevard.

- Design signs as an integral part of a development project which are informative, compatible with the scale of surrounding development and architecturally compatible with the project and surrounding area.

Recommendations for the West Clairemont Plaza Site
(Vacant site adjacent the proposed LRT station at the southeast intersection of Clairemont Dr. and Morena Blvd.)

1. Use
   - Retail and commercial services should be encouraged on the site. Professional offices are also permitted. Residential uses may be permitted on the eastern and southern portions of the lot and above the ground floor throughout the site.

2. Architecture and Site Design
   - Ensure compatibility with adjacent residential development
   - Support use of the Mid-Coast transit line,
   - Enhances the community image
   - Development should occur with a unifying architectural, signage and landscaping theme and comprehensive pedestrian and bicycle pathways.
   - Development should capitalize on the site's topography
   - Pedestrian amenities such as landscaping and wide sidewalks (eight to ten feet wide) should be provided along the Clairemont Drive edge. This street segment should link the Clairemont Community to Mission Bay Park through improved pedestrian access and a landscaping theme that visually relates to Mission Bay Park.
   - Development along the Morena Boulevard frontage should be pedestrian-friendly, with building entrances and windows oriented to the street. A direct pedestrian connection should be made to the future trolley station. Landscaping should link the shopping center with the transit station.
   - The Ingulf Street side shall be developed with sensitivity to the residential areas to the south, minimizing noise impacts and street parking conflicts. Any vehicular entrance on this side should be located between Morena Boulevard and Chicago Street.
3. Transportation Improvements
   - Provide clear access points to the shopping center. The primary vehicular access should be from Clairemont Drive. Consolidate curb cuts.
   - Pedestrian pathways should occur throughout the site. The pathways should be landscaped and protected from vehicular interference.
   - Redevelop the commercial areas on Morena Boulevard with off-street parking regulations

Recommendations for Streets

Morena Boulevard

- Morena Boulevard should be restriped to three lanes (two through lanes and a center, two-way turn lane) between West Morena Boulevard (north intersection) and Tecolote Road.
- Direct freeway access from Morena Boulevard to I-5 should be provided. A direct ramp from Morena Boulevard to Clairemont Drive should be developed to provide direct access to I-5. This would reduce the through traffic on adjacent residential streets attempting to access the freeway.
- Morena Boulevard should have wider sidewalks to enhance pedestrian circulation.
- Signalize the intersection of Morena Boulevard and West Morena Boulevard (northern intersection)

Knoxville Street

- Knoxville Street should be a through street connecting Morena Boulevard to West Morena Boulevard. This connection will improve circulation by providing a connection between the community and a major street while bypassing the Morena Boulevard-Tecolote Road intersection. The Knoxville connection will also require the widening of Morena Boulevard from Knoxville Street to Tecolote Road, including the bridge over Tecolote Creek, to provide two northbound turn lanes, one southbound left-turn lane, one southbound through/right-turn lane, and an exclusive southbound right-turn lane.

Recommendations for LRT Stations

The proposed transit station at the intersection of Clairemont Drive and Morena Boulevard should be two to three acres to accommodate parking. An intensification of multifamily development and commercial and industrial uses, adjacent to the transit station, just south of Tecolote Road on Morena Boulevard, is recommended (see Land Use Elements):

- Shelters with benches should be provided for passenger waiting areas.
- LRT stops should include graphics identifying LRT routes and schedules.
- Bicycle racks and lockers should be provided at each LRT stop.
- Landscaping should be consistent with citywide landscaping guidelines.

Recommendations for Utilities

All utility wires and transmission lines in Clairemont Mesa should be placed underground where technically and economically feasible. Priority areas for the undergrounding of overhead utility wires should include the community's major transportation corridors in order to visually improve the community character. These areas include:

- West Morena Boulevard from Tecolote Road to Morena Boulevard
- Morena Boulevard from West Morena Boulevard to Balboa Avenue
- Clairemont Drive from Morena Boulevard to Balboa Avenue

Linda Vista Community Plan (Adopted 1998)

Existing Conditions Overview

- Morena serves a regional as well as local market, and has a concentration of businesses related to home furnishings and home improvement. There are also numerous warehouse and distribution facilities, as well as some light manufacturing
- Lacking a major grocery store
- Morena area suffers from a disorganized appearance and confusing traffic flow
- Landscaping is not cohesive
- Lacking a community-wide design character and cohesive image
- Existing trolley station at Morena Blvd and Napa Street
- Low-medium residential community with sense of community spirit and cooperation (outside our project area)
- Presence of University of San Diego (USD) (adjacent our project area, to the east)

Project Area Vision

- Moderate growth and increases in residential density
- Bus and private shuttle transportation will link into the new LRT lines
- Enhanced pedestrian travel, with improved sidewalks and landscaping
- Morena industrial area will continue to be an important job center
- Morena commercial will continue to provide regional shopping and will expand local services, particularly restaurants and a local supermarket
- Conversion of industrial land east of Napa Street to residential uses

Project Area Proposed Land Use

Relevant Recommendations for Land Use:

- Attract new restaurants and a local supermarket
- Designate area around the trolley station for mixed-use w/ ground floor retail
- Designate Morena Blvd for general commercial uses
- Promote the concentration of home furnishing and home improvement businesses along Morena Blvd
- Designate area between Hwy 5 and Morena Blvd for light industrial
- Ensure development regulations support rather than discourage needed redevelopment
- Maintain Morena industrial job center, and ensure development regulations encourage business expansion and business attraction

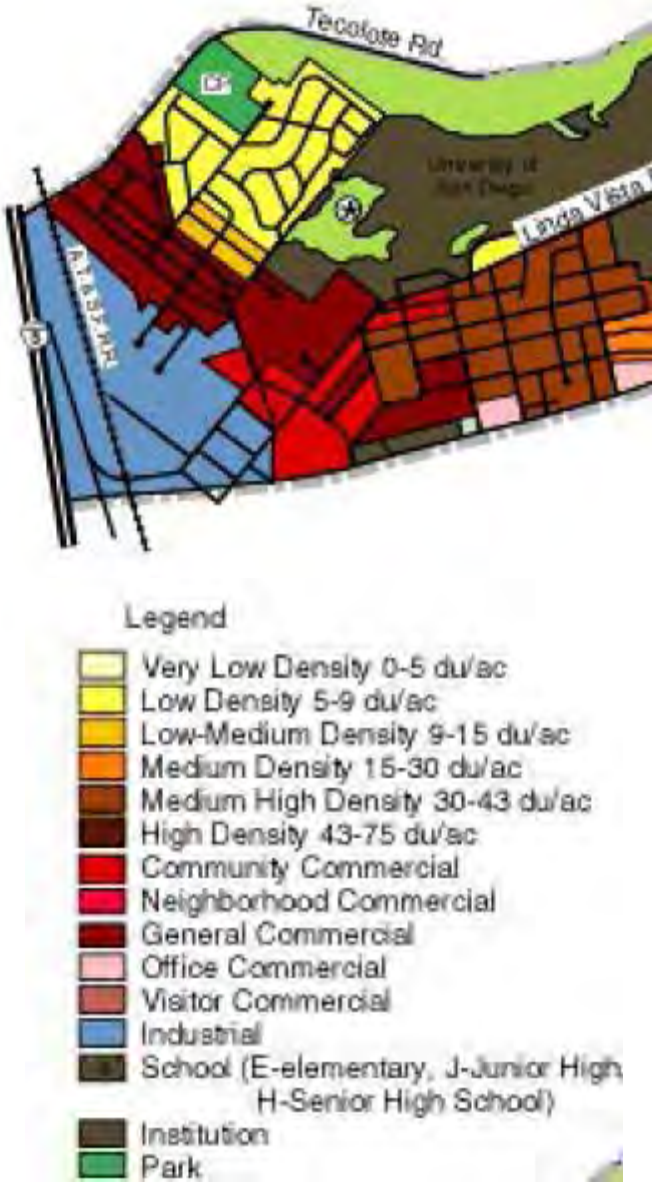


Figure 3-2: Linda Vista Community Plan Proposed Land Uses

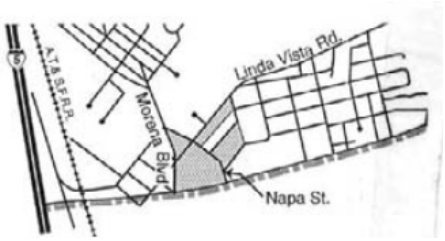


Figure 3-3: Trolley station area

Figure 3-4: Proposed general commercial designation along Morena Blvd

Figure 3-5: Proposed industrial designation

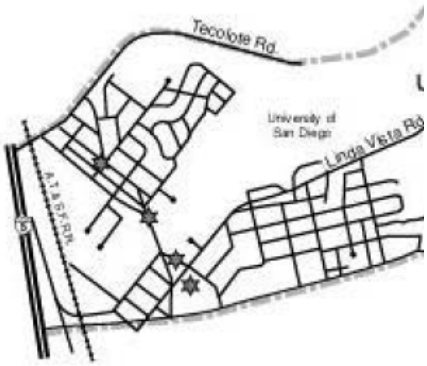


Figure 3-6: Proposed public art locations

Relevant Recommendations for Urban Design

- Promote beautification and a cohesive image through
  - a façade rebate program
  - undergrounding utilities
  - Coordinated signage, lighting, street furnishings and landscaping design program (see Table 1 and 2 Street Tree Plan in the Linda Vista Community Plan document)
  - public art (figure 4)
- Present positive visual image from I-5, Interstate 8, Pacific Highway and Mission Bay Park
- Pedestrian and transit-oriented features around the light rail and trolley stations
- Landmark development at the trolley station to help establish an architectural image for the community Commercial Design Standards for the Community Plan Implementation Overlay Zone (CPIOZ)

Development Feature	CPIOZ Development Standard
Building Height	Max 30' in coastal zone, otherwise max 45'
Sidewalk width	Min 7' in commercial areas, min 5' in industrial areas
Off-street parking ratios	Medical and dental office: 1 space per 250 SF Professional business office: 1 space per 300 SF Retail and commercial service 1 space per 400 SF Wholesale, distribution, and manufacturing 1 space per 1500 SF Hotel: 1 space per room

Table 3-2: CPIOZ Standards

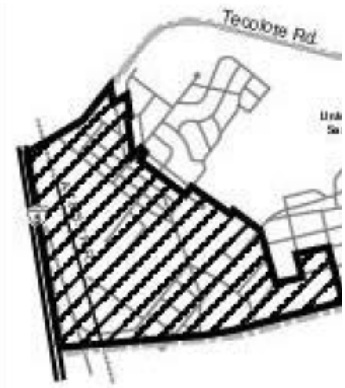


Figure 3-7 Area Subject to CPIOZ regulations

Relevant Recommendations for Circulation

- Improve pedestrian environment: widen sidewalks, install lighting and benches
- Provide walkways between parking and stores
- Minimize curb cuts
- Encourage use of shuttles from transit stations
- Improve signage leading to I-5 from the Morena area
- Enhance street medians and excess right-of-way with landscaping, public art and other amenities (e.g. at juncture of Morena and West Morena Blvds.)
- Widen Napa Street to 4-lane collector between Linda Vista Rd and Morena Blvd
- Widen Morena Blvd north of Tecolote Rd
- Connect Knoxville Street to West Morena Blvd
- Improve ped and bus connections from Tecolote LRT station to Mission Bay and Morena Shopping Quarter

- Require commercial development to provide landscaping and waiting areas at transit stops
- Require commercial development to provide bike racks
- Encourage shared parking
- Rename Morena or West Morena Blvd to avoid confusion

Recommendations for the Trolley Station Site (appropriate for future LRT stations)

- Buildings should be oriented to the streets
- Provide convenient pedestrian circulation
- Develop as a landmark project
- Include amenities for transit riders and that help support transit usage
- Provide commercial uses to support local residents and students
- Provide semi-public uses, i.e. day care, plazas, outdoor seating areas, and public art
- Locate identification kiosks or displays directing passengers to adjacent attractions
-

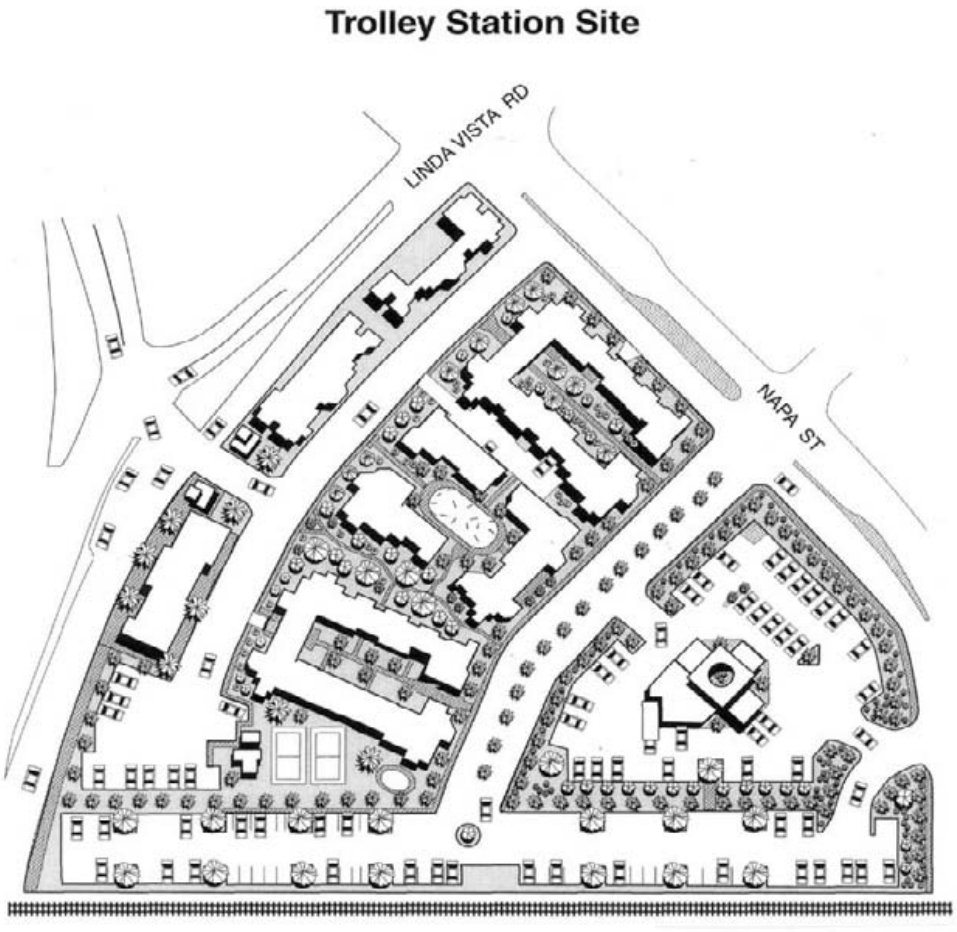


Figure 3-8: Morena Blvd LRT Station Site Recommendations

3.7.4 Zoning

Zoning represents the land uses allowed and the development standards applied to the land use that each property must abide by in order to be in legal conformance with the City's regulations. While many properties are non-conforming, future development must adhere to these guidelines and zoning is the best indicator on what will be built on a particular property.

The following discussion provides details about the zoning districts comprising the study area:

Zoning Districts in the Project Area

Table 3-3 identifies the current zoning districts within the project area, along with the allowed density, intensity and building heights. Table 3-4 provides additional detail on types of uses allowed in each of the commercial zoning districts. Figure 3-9 graphically displays the extents of the zoning districts. Zoning Districts are found in Chapter 13 Zones of the Municipal Code.

Purpose of Zoning Districts

The purpose of the RM zones is to provide for *multiple dwelling unit development* at varying densities. The RM zones individually accommodate *developments* with similar densities and characteristics. Each of the RM zones is intended to establish *development* criteria that consolidates common development regulations, accommodates specific dwelling types, and responds to locational issues regarding adjacent land uses.

The purpose of the RS zones is to provide appropriate regulations for the *development* of *single dwelling units* that accommodate a variety of *lot* sizes and residential dwelling types and which promote neighborhood quality, character, and livability. It is intended that these zones provide for flexibility in development regulations that allow reasonable use of property while minimizing adverse impacts to adjacent properties.

The purpose of the CN zones is to provide residential areas with access to a limited number of convenient retail and personal service uses. The CN zones are intended to provide areas for smaller scale, lower intensity developments that are consistent with the character of the surrounding residential areas. The zones in this category may include residential development. Property within the CN zones will be primarily located along local and selected collector streets.

The purpose of the CC zones is to accommodate community-serving commercial services, retail uses, and limited industrial uses of moderate intensity and small to medium scale. The CC zones are intended to provide for a range of development patterns from pedestrian-friendly commercial streets to shopping centers and auto-oriented strip commercial streets. Some of the CC zones may include residential development. Property within the CC zones will be primarily located along collector streets, major streets, and public transportation lines.

The purpose of the CP zone is to provide off-street parking areas for passenger automobiles. The CP zone is intended to be applied in conjunction with established commercial areas to provide needed or required off-street parking.

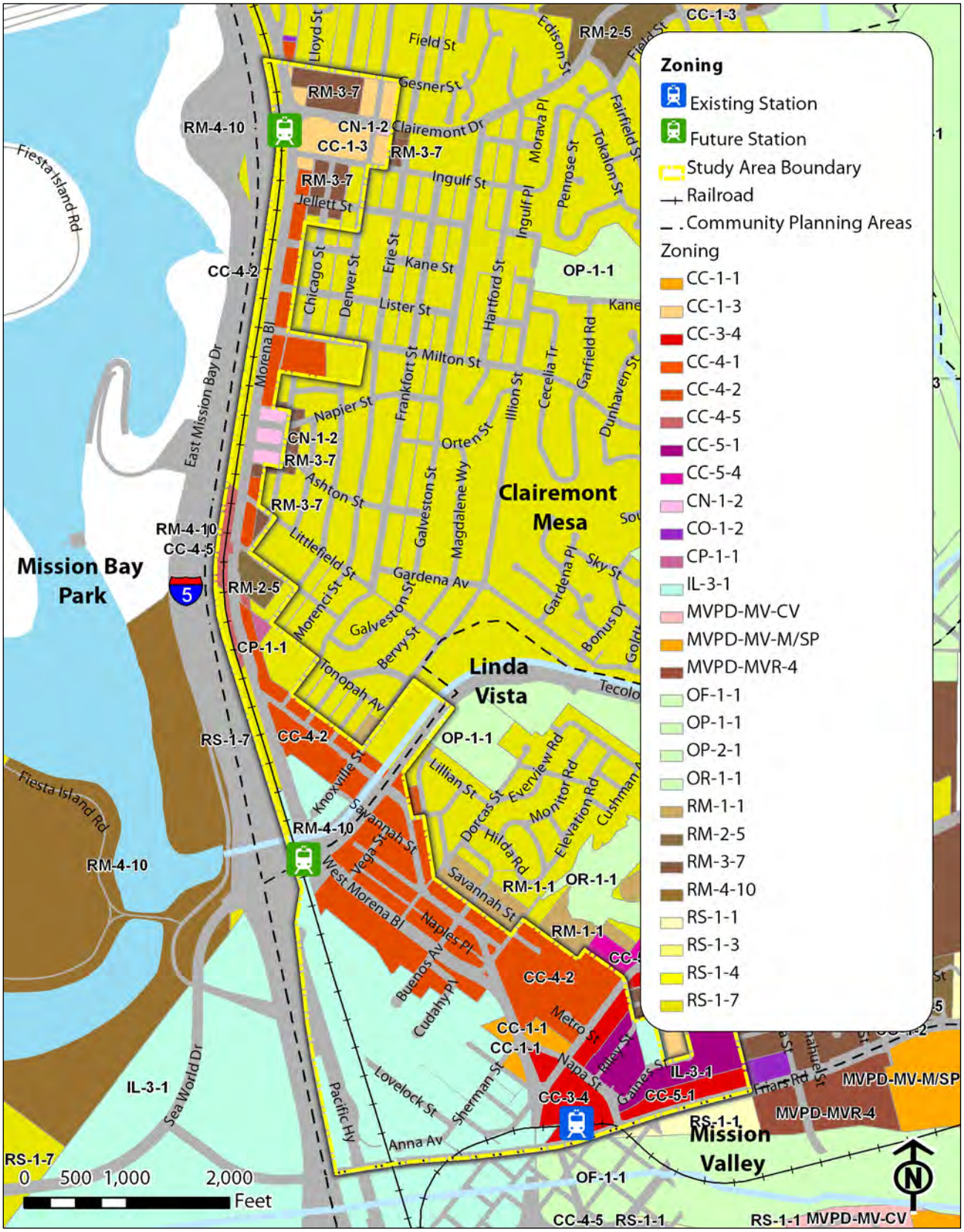


Figure 3-9: Zoning

Zoning District Code	Zoning District Name	Allowed Uses (broadly)	Density	Intensity	Building Heights
Residential Districts					
RM-2-5	Residential - Multiple Unit	Medium Density Residential	maximum density of 1 du for each 1,500 square feet of lot area	Maximum 1.35 FAR	40'
RM-3-7	Residential - Multiple Unit	Medium Density Residential with limited commercial	maximum density of 1 du for each 1,000 square feet of lot area	Maximum 1.8 FAR	40'
RS-1-7	Residential – Single Unit	Single Dwelling Units	Maximum density of 1 du per lot. Requires minimum 5,000-square-foot lots	Determined by lot size. FAR ranges from 0.70 for 3,000 SF lots to 0.45 for 19,000+ SF lots.	24/30' See Section 131.0444(b)
Commercial Districts					
CN-1-2	Commercial – neighborhood (development with an auto orientation)	Convenient retail and personal service uses	n/a	Maximum FAR: 1.0	30'
CC-1-1	Community-serving Commercial (strip commercial characteristics)	mix of community-serving commercial uses and residential uses	maximum density of 1 du for each 1,500 square feet of lot area	Maximum FAR: 0.75 0.75 FAR bonus with mixed-use (75% of bonus must be residential)	30'
CC-1-3	Community-serving Commercial (*development* with an auto Orientation)	mix of community-serving commercial uses and residential uses	maximum density of 1 du for each minimum 1,500 square feet of lot area	Maximum FAR: 0.75 0.75 FAR bonus with mixed-use (75% of bonus must be residential)	45'
CC-3-4	Community-serving Commercial (development with a pedestrian orientation)	mix of pedestrian-oriented, community-serving commercial uses and residential uses	maximum density of 1 du for each minimum 1,500 square	Maximum FAR: 1.0 0.5 FAR bonus with mixed-use	30'

Table 3-3: Zoning Regulations

Zoning District Code	Zoning District Name	Allowed Uses (broadly)	Density	Intensity	Building Heights
			feet of lot area	(50% of bonus must be residential)	
CC-4-2	Community-serving Commercial (high intensity, strip commercial characteristics)	heavy commercial uses and residential uses	maximum density of 1 du for each minimum 1,500 square feet of lot area	Maximum FAR: 2.0	60’
CC-4-5	Community-serving Commercial (high Intensity, pedestrian orientation)	Heavy commercial uses and residential uses	maximum density of 1 du for each minimum 1,500 square feet of lot area	Maximum FAR: 2.0 2.0 FAR bonus with mixed-use (50% of bonus must be residential)	100’
CC-5-1	Community-serving Commercial (strip commercial characteristics)	mix of heavy commercial and limited industrial uses and residential uses	maximum density of 1 du for each minimum 1,500 square feet of lot area	Maximum FAR: 0.75 0.75 FAR bonus with mixed-use (75% of bonus must be residential)	30’
CP-1-1	Commercial - Parking	Off-street parking	n/a	Maximum FAR: 1.0	30’
Industrial Districts					
IL-3-1	Industrial Light	mix of light industrial, office, and commercial uses	n/a	Maximum FAR: 2.0	No limit

Table 3-3: Zoning Regulations (continued)

Commercial Zone	Types of Uses Allowed
CN zones	Retail Sales, Commercial Services, Offices,
CC zones	Retail Sales, Commercial Services, Offices, Research & Development, Vehicle & Vehicular Equipment Sales & Service
CP zone	Parking Facilities

Table 3-4: Commercial Zone Allowed Uses

The purpose of the IL zones is to provide for a wide range of manufacturing and distribution activities. The development standards of this zone are intended to encourage sound industrial development by providing an attractive environment free from adverse impacts associated with some heavy industrial uses. The IL zones are intended to permit a range of uses, including nonindustrial uses in some instances.

Parking and the Transit Overlay Zone

Parking ratios are provided in Municipal Code Chapter 14, Article 2, Division 5, sections 142.0525 and 142.0530.

There is a Transit Overlay Zone transit-serving development, see Chapter 13 Article 2: Overlay Zones Division 10: Transit Area Overlay Zone. The purpose of the Transit Area Overlay Zone is to provide supplemental parking regulations for areas receiving a high level of transit service. The intent of this overlay zone is to identify areas with reduced parking demand and to lower off-street parking requirements accordingly. Parking regulations are in sections 142.0525 and 142.0530, see column titled “transit area.”

The Transit Overlay Zone applies to the area immediately surrounding the LRT station at Clairemont Drive, but could be applied around the LRT station at Tecolote as well.

3.7.5 Related Efforts

Other efforts that are independent of the MBAP, but related to the goals and objectives of the study include the Mid-Coast LRT Extension Project, the San Diego Pedestrian Master Plan and the San Diego Bicycle Master Plan.

3.7.6 Mid-Coast Station Planning

The Mid-Coast LRT Extension project is a SANDAG-led project examining the extension of the region's LRT system north from Old Town San Diego to the University of California, San Diego (UCSD). The proposed alignment parallels the existing railroad tracks on the west side of the MBAP study area and two new stations are planned within the study area at Tecolote Road/Sea World Drive and at Clairemont Drive.

The Mid-Coast study examines the planning and siting of LRT-related facilities, including stations. The Mid-Coast study analyzes the dynamics of the area surrounding the proposed LRT facilities and makes recommendations both for MTS property and public ROW in the vicinity of the proposed facilities.

3.7.7 San Diego Pedestrian Master Plan

The San Diego Pedestrian Master Plan provides a comprehensive framework for identifying, prioritizing, and implementing pedestrian projects within each community plan area, with the goal of enhancing neighborhood quality and mobility options. The Plan's framework also discusses existing pedestrian conditions, pedestrian-related City policies, and potential project funding sources.

The Pedestrian Master Plan has been, and will be, implemented per individual community plan areas. Incorporating the methods established in the Plan's framework, the City and the community work together to identify and prioritize potential projects to improve the pedestrian environment.

Phase I, which provided the implementation framework, was completed in December 2006. Phases II, III, and IV, which include the communities of Greater North Park, Southeastern San Diego, Greater Golden Hill, Uptown, Normal Heights, Barrio Logan, City Heights, College, Kensington/Talmadge, Midway/Pacific Highway, Old San Diego, Ocean Beach, Pacific Beach, and San Ysidro are either completed or on-going.

3.7.8 San Diego Bicycle Master Plan

The City of San Diego Bicycle Master Plan Update seeks to produce a renewed bicycle plan for the City and provides a framework for making cycling a more practical and convenient transportation option for a wide variety of San Diegans with different riding purposes and skill levels. The plan update evaluates and builds on the 2002 Bicycle Master Plan so that it reflects changes in bicycle user needs and changes to the City's bicycle network and overall infrastructure.

The final report was submitted in June 2011.

3.8 Regulatory Setting

The implications of the land use planning documents and zoning discussed in previous sections include a range of development intensities for properties within the study area. Analysis of this range is key to understanding which properties are already poised to meet future needs and which will be constrained.

3.8.1 Allowable Range of Land Uses

As described above, the IL, CC, and CN zoning designations provide for flexibility in uses, including some non-industrial uses in the IL zone, and commercial and residential uses in the CC and CN zones. RM zones are exclusively residential, but allow for a range of intensity of development.

3.8.2 Allowable Range of Densities

The maximum allowable density for each zoning category was determined for zones which allowed residential dwelling units (du). Figure 3-10 shows that almost all of the study area has a maximum residential du standard of 1 du/1,500 square feet. This equates to approximately 29 du/acre. The multi-family zones near Clairemont Drive have a higher density limit, at 1 du/1,000 square feet, or almost 44 du/acre.

3.8.3 Allowable Range of Building Heights

Figure 3-11 displays the current height limits of properties within the study area. The range of height limits is dramatic, ranging from 24/30 feet to no limit. The no limit portion of the study area is tied to the industrial properties to the south/southwestern. Much of the commercial properties along Morena/W Morena have a height limit of 60 feet, and the other properties between Friars and Ingulf Street have a limit between 30-40 feet. The Properties surrounding the Clairemont Drive/Morena Boulevard intersection have height limits of 40-45 feet. Although not in the study area, it should be noted that the single family neighborhoods to the east of the study area have the lowest height limit at 24/30 feet, approximately 30 feet less than the commercial areas that line much of Morena Boulevard.

3.8.4 Allowable Range of Floor Area Ratios

The variety of FAR permitted within the study area ranges fairly dramatically, from 0.75 to 2.0. The properties with a 2.0 FAR cover most of the study area – the only areas that have lesser FARs occur south of the southern Morena/W Morena split, near Asher Street, between Ashton and Napier Streets, and north of Ingulf Street (see Figure 3-12).

The areas to the east of the study area have a variety of FARs, or their zoning does not directly correspond to a specific FAR. The properties to the south of Linda Vista Road (east of the study area) generally have a 1.8 FAR.

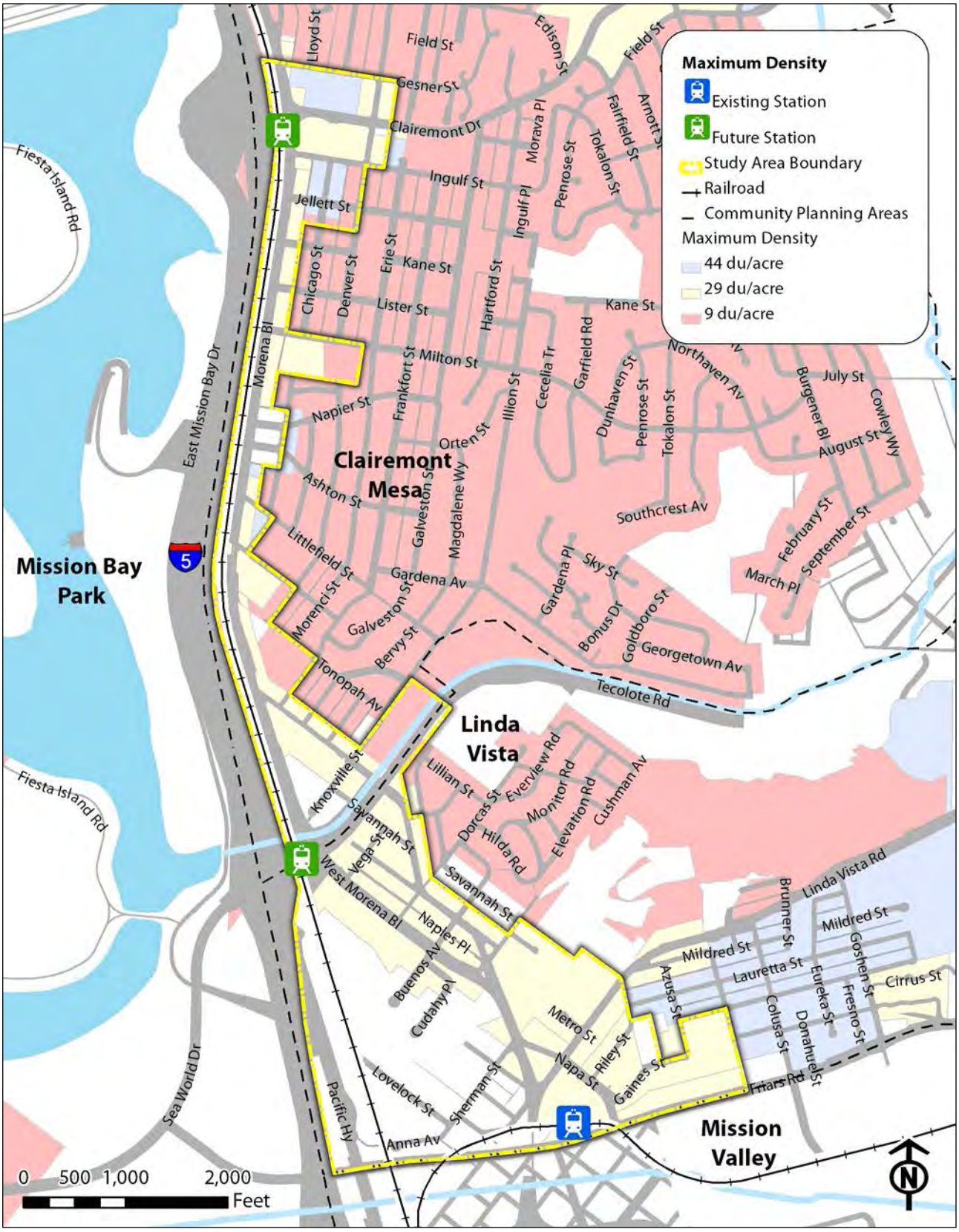


Figure 3-10: Maximum Residential Density

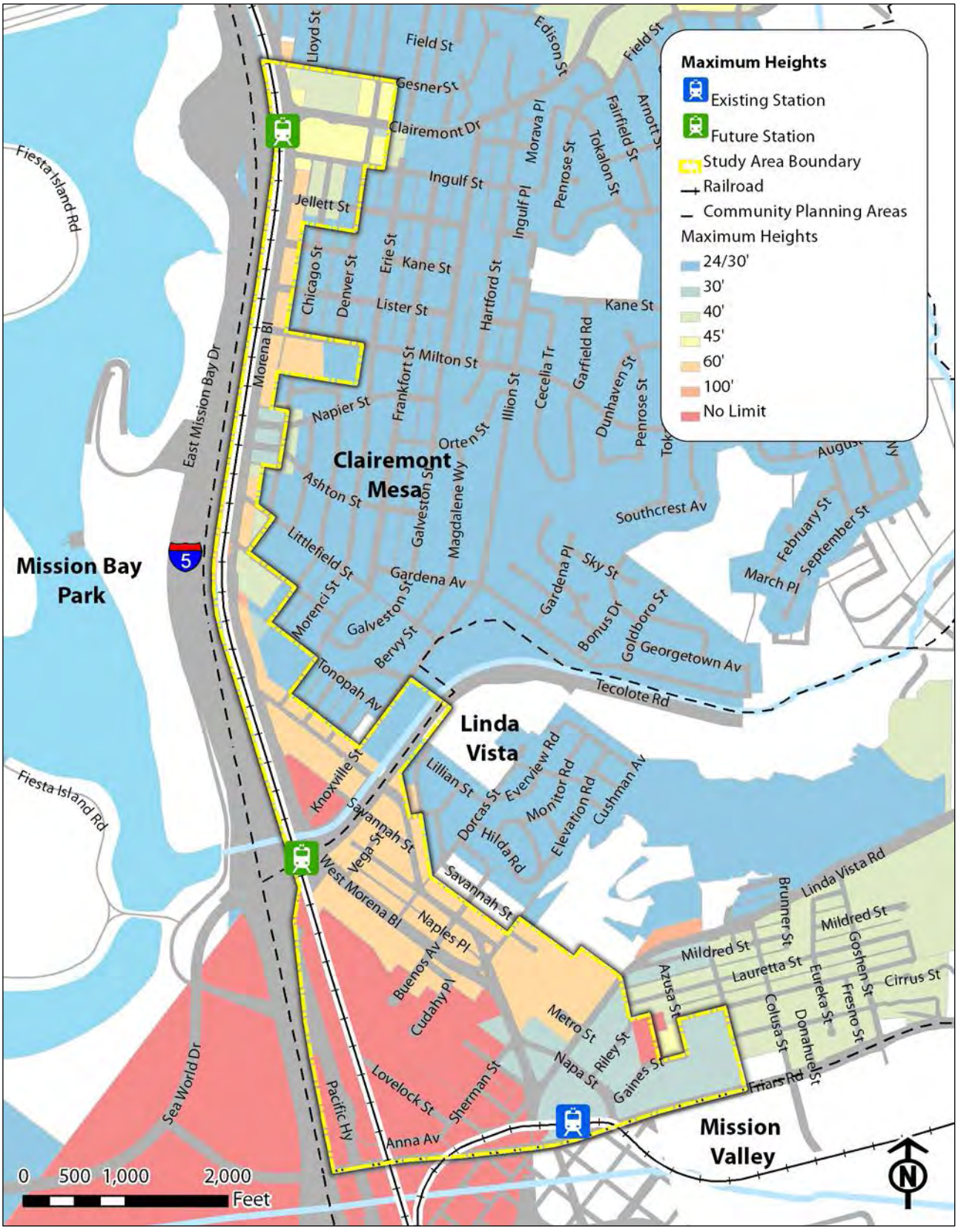


Figure 3-11: Maximum Building Heights

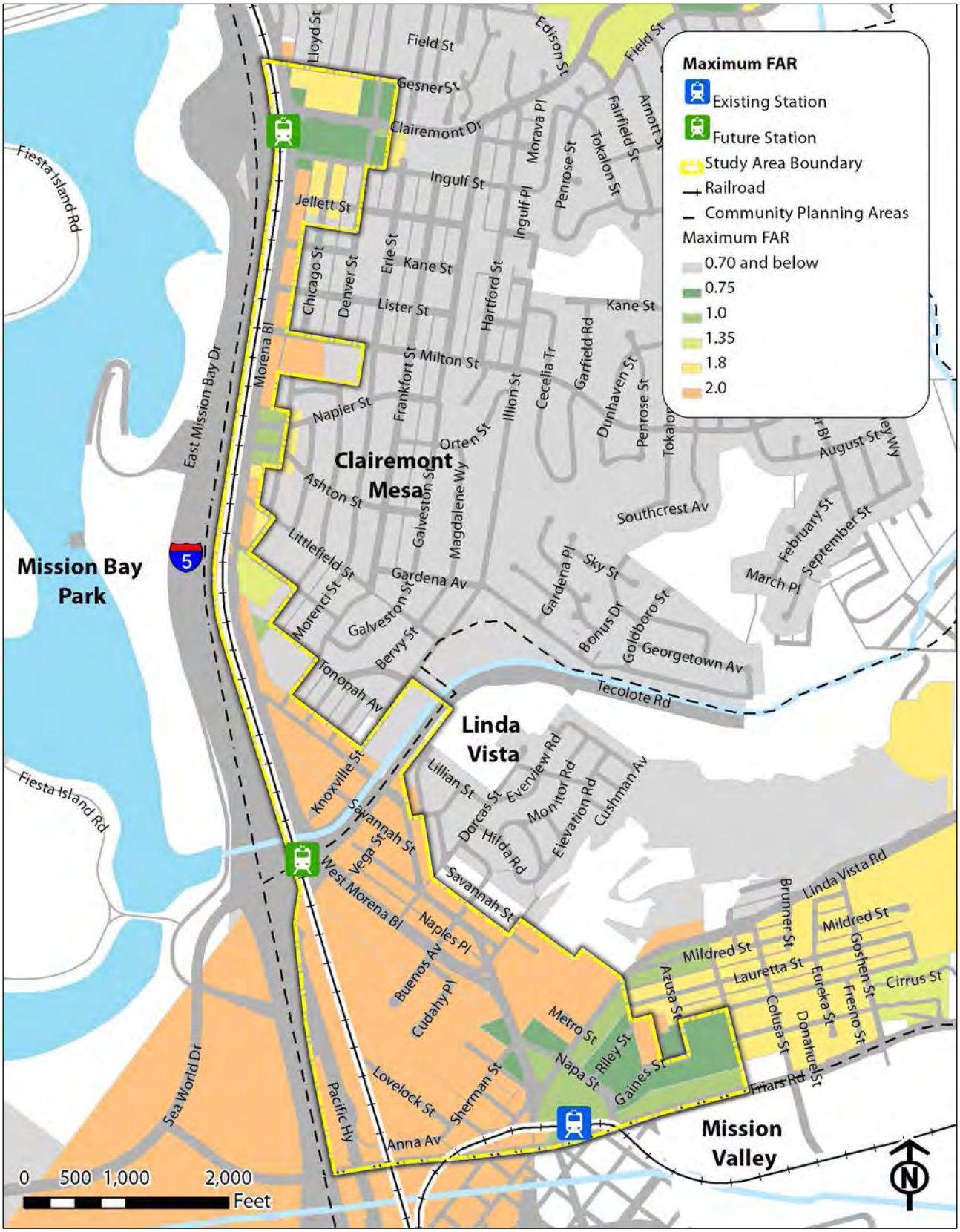


Figure 3-12: Maximum FAR

3.9 Market Analysis

The economic conditions of the market area around the study area help to determine the amount and type of development that occurs. Below is a discussion of the current state of conditions, trends, and market categories within the study area.

3.9.1 Market Area

The study area lies within a larger market area that encompasses land as far east as State Route 163 (in Mission Valley), as far north as Balboa Avenue, as far west as Interstate 5, and as far south as Interstate 8. The market area's eastern boundary north of Mission Valley is defined largely by Tecolote Canyon/Via Las Cumbres Road.

SANDAG projections for the year 2035 include:

- Approximately 6,700 new residential units of all types;
- Approximately 290,000 to 410,000 square feet of office space; and
- Approximately 260,000 to 350,000 square feet of retail space.

In addition to projected growth, the strategic location and proposed improvements associated with the Mid-Coast transit project indicate significant potential for new development. In spite of these positive indicators, development opportunities are constrained by the lack of suitable sites.

3.9.2 Current Conditions and Trends

The study area has good connectivity to the surrounding region, via Interstate 5, Interstate 8, surface streets, and MTS transit service. One of the current economic drivers in the market area is USD. The anticipated growth of the university's students and faculty will create additional demand in the housing market. Secondly, the Mid-Coast Corridor Trolley extension project will enhance the existing strength of the market area's location and connectivity to the surrounding neighborhoods of University City, Downtown, Mission Valley, and other areas served by MTS.

Below is a discussion of the current conditions and trends with respect to specific market areas:

3.9.3 For Sale Residential

The MBAP market area, like the rest of the country, has been affected by the national decline in housing prices resulting from the financial crisis of 2007-2008. However, median resale home values suggest a recovering for-sale housing market. For 2012, the median single-family resale price was $499,000 in the 92110 zip code, which is 25% higher than Central San Diego, but 2% lower than the same area in 2011. The 2012 median condo resale was $228,000, a 6% increase over 2011.

3.9.4 Rental Multi-Family

Newer rental residential units, including the Morena Station TOD and other new projects near the study area have strong occupancy and rents:

- One bedroom rents for recently constructed units are priced between $1,645/month to $1,985/month

- Two bedroom rents for recently constructed units are priced between $1,895/month and $2,210/month
- Three bedroom rents for recently constructed units are priced between $2,495/month to $3,000+/month

3.9.5 Office

The MBAP market area has a limited inventory of mostly older office and retail developments with limited vacancies. This reflects an area without a distinct market identity and has had a limited amount of new development. While existing rents do not support new development, if development of higher quality office space occurred, it would likely obtain higher rents. For reference, current office asking rents within the market area range from $1.00 to $1.50 per square foot per month, full service.

3.9.6 Retail

The market area has a relatively robust retail market, with asking rents above average for the City and County. Retail asking rents in the market area range from $1.50 to $3.25/square foot per month, triple net (NNN).

3.9.7 Industrial

The industrial properties and land uses within the study area are assumed to be retained, although not expanded, through the MBAP analysis. While these land uses perform a role in the overall economy, they are typically not transit-supportive uses or integrated into transit-supportive development projects.

For additional information, see Appendix X.X

4 Land Use

The land use in the Morena Boulevard Study Area is critical in a number of areas because San Diego as a region will see future growth and development. Land use needs to facilitate this growth especially as it surrounds the Linda Vista, Tecolote, and Clairemont MTS Trolley Stations.

4.1 Vision

The land use vision is set is set regionally by SANDAG and at a city level by City of San Diego through its General Plan. The Study Area is identified in the General Plan as a Neighborhood Village Center, Transit Corridor, and Urban Village Center. Figure 4.1 City of San Diego General Plan Land Use Map highlights the location of these areas.

At the Existing Conditions workshop, the community provided key input that formed the vision for land use: Encourage and enhance the Morena District as a mixed-use area that has a strong restaurant component, grocery store, and thoughtful density that includes affordable housing and public amenities.

Encourage and enhance the Morena District as a mixed-use area that has a strong restaurant component, grocery store, and thoughtful density that includes affordable housing and public amenities.

Land use is an important component of growth. In the Morena Boulevard Study Area, there were three alternatives discussed through the public outreach process (See Appendix X Workshop3 Summary). The preferred alternative was identified as a moderate growth scenario and is consistent with City of San Diego planning documents discussed in Chapter 2 Existing Conditions.

4.2 Land Use Criteria

Land use is a critical piece for the Study Area and how it develops in the future. Chapter 2 identified land use visions and recommendations from existing planning documents. In addition to this base of information, land use is guided by zoning and what is each property must abide by in order to be in legal conformance with City of San Diego's regulations.

In addition to zoning, land use is guided by the different types of land uses, range of densities, range of building heights, and allowable range of floor area ratios. These criteria will be discussed in the existing land use and preferred land use scenarios. Characteristics such as study area development level, density, building heights, and floor area ratios (FARs) all contribute to influence how an individual feels about an area and how he or she moves through it

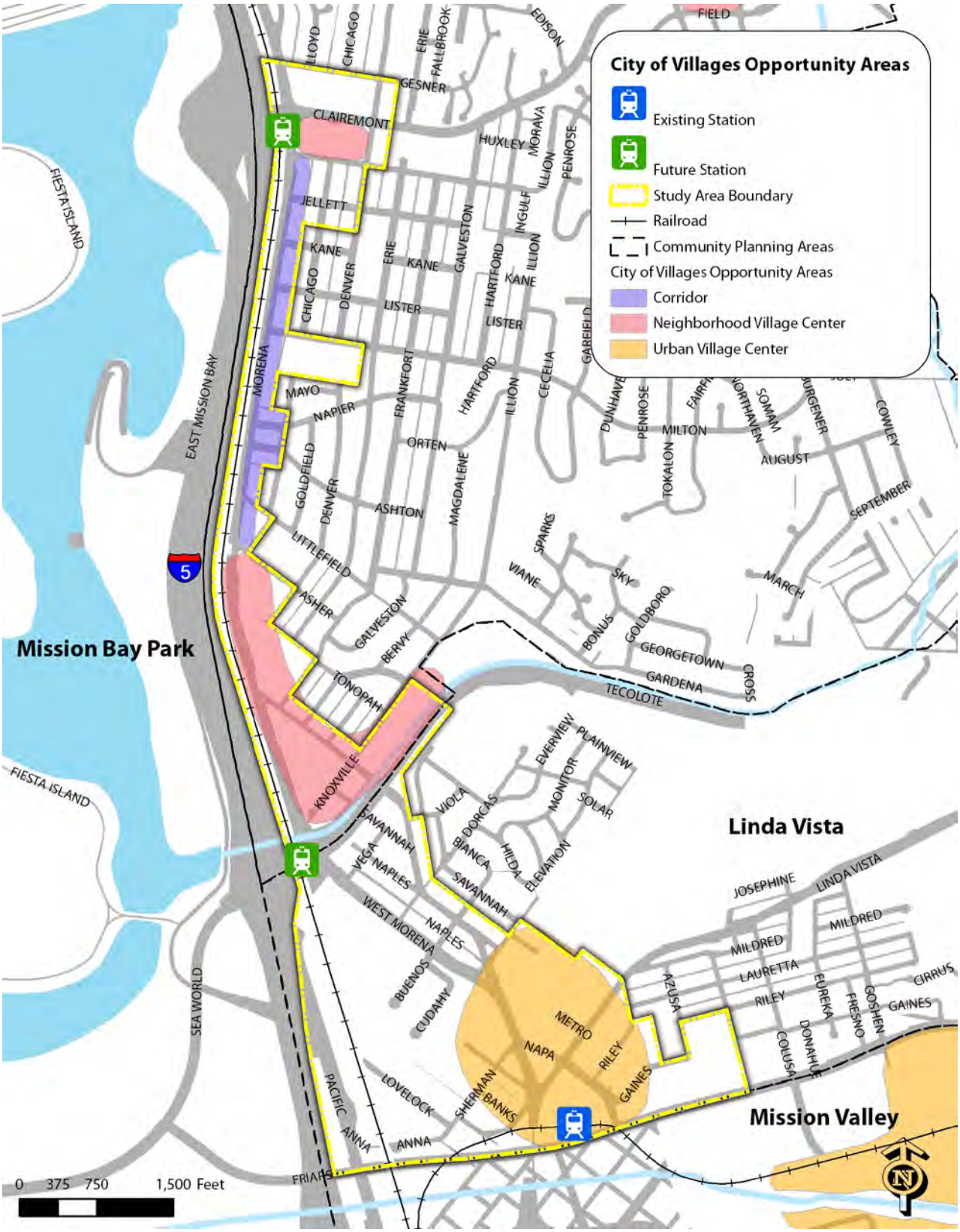


Figure 4-1: City of San Diego Land Use Areas

4.3 Land Use Alternatives

The community was presented with three land use alternatives in Workshop 3 of the community outreach process. The land uses proposed by the MBAP not only have an impact on the urban form of the study area, but also the efficiency and loading demand on the circulation system. Any change in land uses, or change in intensity of land use, can have an impact, positive or negative, on mobility within the study area. In addition, urban design can greatly impact how a particular land use is articulated on a site through building design. This will be further discussed in Chapters 4 and 5.

The MBAP developed alternatives for both land use and circulation together. Circulation and land use were considered together because it is necessary to consider the additional service that must be provided on the streets in the Study Area. In order to provide the community with a range of options, the planning team developed three scenarios which represent varying land use intensities that are all consistent with the vision described in the previous section. These scenarios range from least intensive ("conservative") to most intensive ("aggressive"), with one scenario in between ("moderately aggressive").

The vision for the land use scenarios of the MBAP was based on input provided by the community, the results of market demand/trend analyses, and the city's goals of supporting transit through complementary land use patterns. The resulting land use vision converts many existing retail/commercial parcels into a higher amount of multi-family residential parcels. Key parcels near the existing and proposed trolley stations are envisioned for a mix of uses to include residential, retail, commercial, and office. The goal of this shift is to accommodate future growth in areas that are well served by transit, creating hubs of activity and density that incorporate sustainable principles while also adding diversity and vibrancy to the existing neighborhood. Whenever possible, a balance of jobs and housing should be obtained in order to keep trips more local. A balance of destinations and origins in areas around transit facilities allows for primary and reverse commute balance of users on the transit line. The incorporation of a wide variety of uses that support a community's needs generally keeps trips shorter, allowing for more of them to be made by bike or walking. All of these considerations are critical to creating a complete community.

In order to capitalize on the anticipated investment in the Mid-Coast Trolley corridor and its associated stations, the plan set a goal of achieving a range of between 30 and 70 dwelling units per acre. This range is widely accepted as the ideal range for transit oriented development. The goal is to strategically place the higher density development closest to the stations where walk times are shortest, and gradually decrease density as the distance increases. This graduated approach also has the benefit of lessening physical incompatibilities with existing lower density single family development.

The initial phases of the project established that a density of 70 dwelling units per acre could generally be achieved through a development pattern of four stories of multi-family construction built on a podium of two floors structured parking, resulting in an overall height of six stories. However, this height in some areas is not likely to be supported by the public based on concerns over density and the potential for blocking views from many homes located up slope of the study area. The south end of the project study area does not have the neighborhood sensitivity of view blockage as the north end does. This is a result of the depth of non-residential development between I-5 and the slopes where

housing exists, and it is also related to the lower elevation gains that occur when moving up on landforms to the east. Not as many views in the south end would be blocked and most of the views are of the industrial areas of Morena Boulevard and the freeway aerial structures of I-5 and I-8.

As a point of comparison, below are key metrics comparing existing land use quantities (based on City-provided 2013 GIS data) with the community plan land uses (also referred to as the "adopted" land uses) and the MBAP land uses as developed in the preferred scenario:

Existing Land Uses:
- Residential: approximately 1,000 dwelling units
- Non-Residential (commercial, retail, office, industrial, etc.): approximately 3.4 million square feet

Community Plan/"Adopted" Land Uses:
- Residential: approximately 3,600 dwelling units
- Increase of approximately 2,600 dwelling units from existing
- Non-Residential (commercial, retail, office, industrial, etc.): approximately 3.2 million square feet
- Decrease of approximately 200,000 square feet from existing

4.3.1 Conservative Land Use Alternative

The conservative land use scenario envisions the least amount of land use changes paired with the lowest intensity of development on the changed parcels. The largest areas of change in the Conservative scenario include:

- The Bayview Plaza site is proposed to include mixed-use development, including ground floor commercial/retail and upper floors residential over structured parking. The proposed maximum height is 50' (approximately five stories). Significant development on this site is warranted because of the close proximity to the proposed Clairemont station. Not only would residents/patrons of the development benefit by having easy access to transit, but also the station would benefit from the activity and security provided by nearby shops and residents.
- No changes are proposed at the business hub near Ashton/Napier in order to encourage development similar to what exists. One potential change is the replacement of the fast food restaurant with a small public park.
- RV parks east of Morena (at Knoxville and Frankfort) are envisioned to be converted to multi-family residential. Proposed maximum height is 40' – 50', although the edges closer to the surrounding residential could transition to 30'.
- The most intensive expansion of residential occurs south of Tecolote Road, where little to no residential uses currently exists. Mixed use and/or exclusive use residential parcels are proposed along Vega Street on the Toys R Us, Petco, and Coles sites (west of West Morena), and east of Morena Boulevard between Cushman Avenue and Linda Vista Road. The proposed maximum height is 50' – 60' (approximately five to six stories). This corridor is a prime location between the proposed Tecolote trolley

station and the existing Morena station. New residences and shops in this area would be within a 10 to 15 minute walk of at least one of these stations.

- The conservative scenario proposes the retention of and reinvestment in existing retail between Morena and West Morena (between the south split and Tecolote Road) and along the east side of Morena just south of the south split. This is envisioned as the core of the "Design District" and will create continuity in the character of the neighborhood as residential uses are introduced.
- The conservative scenario also envisions the retention of existing commercial/restaurant uses along the east side of Morena Boulevard (between the Linda Vista Road and Tecolote Road).

4.3.2 Aggressive Land Use Alternative

The aggressive land use scenario envisions an extensive amount of land use changes paired with high intensity development on the changed parcels. The largest areas of change in the aggressive scenario include:

- The Bayview Plaza site is proposed to include mixed-use development, including ground floor commercial/retail and upper floors residential over structured parking. The proposed maximum height is 60' (approximately six stories). Significant development on this site is warranted because of the close proximity to the proposed Clairemont station. Not only would residents/patrons of the development benefit by having easy access to transit, but the station would benefit from the activity and security provided by nearby shops and residents.
- The commercial properties near the proposed Clairemont station (along the northern portion of Morena Boulevard and near the intersection of Clairemont Drive and Denver Street) would be encouraged to increase density beyond existing levels. The goal would be to achieve a maximum of 30' on most parcels. This would not require a zoning/land use change, but represents an increase in development beyond what exists currently. More intense development in these areas near the Clairemont station would further improve the transit-land use relationship and further reduce vehicular trips in the area.
- The City Chevrolet site (at Milton Street and Morena Boulevard) is envisioned as converting to multi-family residential, with a maximum height of 60' for portions of the project, although the edges along Morena and near the surrounding neighborhood could transition to 20' – 30'. This change of use would occur only if the dealership decided to relocate.
- No changes are proposed at the business hub near Ashton Street/Napier Street in order to encourage development similar to existing uses. Where the conservative and preferred scenarios proposed a park next to the fire station, the aggressive scenario proposes two public plazas, one on the block with the fire station and one at the corner of Napier Street and Morena Boulevard (the current site of the BMW auto repair).
- RV parks east of Morena (at Knoxville Street and Frankfort Street) are envisioned to be converted to multi-family residential. The proposed maximum height is 60', although the edges closer to the surrounding residential could transition to 30'.
- Additional properties along Morena Boulevard between Tecolote Road and the north split with West Morena Boulevard are converted to multi-family residential with a maximum height of 60'. These properties capitalize on the close proximity to the

proposed Tecolote trolley station, which would allow many new residents to walk to the station.

- The area around the proposed Tecolote station increases residential uses between Morena and West Morena as in the conservative scenario, and further expands the mixed-use residential/retail uses west of West Morena. In this scenario, the residential/retail includes the current sites of Toys R Us, Petco, Jerome's, and A-1 Storage. The maximum height for development in this area is 60'. This area is a key location for additional density as it borders the proposed station site and represents some of the largest individual parcels in the corridor, allowing for larger individual developments.
- The aggressive scenario also proposes the conversion of all of the light industrial properties to the southwest of Morena/West Morena. Maximum heights in this area would vary from 30' – 60' to capitalize on the key location between the proposed Tecolote station and the existing Morena station.
- The area near the existing Morena station increases both residential and mixed-use land uses. Under this scenario, two new high-density residential nodes are created: one southeast of Cushman Avenue and Morena Boulevard and the other southwest of Sherman Street and Morena Boulevard. In addition to these nodes, a mixed-use residential/office node is created north of Linda Vista Road and Napa Road. These locations are ideal for higher density development because of their close proximity to the Morena station, as well as USD. The siting of additional office uses in this location is directly tied to the anticipated need for office space near the university. The maximum height for all these nodes is 60'.
- The aggressive scenario also proposes the retention of and reinvestment in existing retail between Morena and West Morena (between the south split and Tecolote Road), on either side of Buenos Avenue, and along the east side of Morena just south of the south split. This is envisioned as the core of the "Design District" and will create continuity in the character of the neighborhood as residential uses are introduced.
- The aggressive scenario also envisions the retention of existing commercial/restaurant uses along the east side of Morena Boulevard (between Linda Vista Road and Tecolote Road). Numerous restaurants already are located along this segment of roadway, and retaining the existing land use and zoning will help to attract more of these uses in this area.

4.4 Preferred Land Use Alternative

In general, workshop attendees supported the goal of shifting some non-residential land uses to residential land uses, as long as a core of businesses were retained and enhanced to support the budding "design district" identity of the corridor. Attendees recognized the importance of increasing the level of development near the existing and proposed trolley stations as a means to direct growth away from established single-family neighborhoods and support long-term sustainability goals. There were varying opinions on the appropriate level of density near the stations, however. Some workshop attendees agreed that 60' in height was appropriate in certain locations, especially if it is "stepped back" as it approaches lower density development. Other attendees were adamant that the existing 30' height limit (in the Clairemont planning area) be enforced. Of particular

concern to this group were blockage of views and the introduction of too much development in an already established neighborhood.

The following are key points and comments received from community members regarding the Land Use Alternatives:

- Several people requested to make sure building heights are restricted to a maximum of 30 feet to prevent view blockages.
- People overall agreed that higher density seems appropriate for this corridor, especially near Linda Vista Road due to the close proximity to USD.
- The idea of implementing a parking district along Morena Boulevard was supported.

Through the City and community's direction, it was felt that a preferred land use scenario would be the best to consider for refinement. Based on input provided by the community and city staff, land use alternatives were merged to produce a scenario that decreases non-residential uses while providing a significant increase in multi-family residential/mixed-uses.

The land use quantities as proposed in the preferred land use alternative are:

- Residential: approximately 5,800 dwelling units (Increase of approximately 4,800 from existing)
- Non-residential commercial, retail, office, and industrial uses: 2.7 million square feet (Decrease of approximately 700,000 square feet from existing)

4.4.1 Proposed Land Use Criteria

Proposed Development Level

Proposed development is largely limited to areas adjacent to the trolley stations and areas identified as mixed-use. The goal is to strategically place the higher density development closest to the stations where walk times are shortest, and gradually decrease density as the distance increases. This graduated approach also has the benefit of lessening physical incompatibilities with existing lower density single family development. Figure 4-2 highlights the proposed land use.

Proposed Densities

The initial phases of the project established that a density of 70 dwelling units per acre could generally be achieved through a development pattern of four stories of multi-family construction built on a podium of two floors structured parking. Figure 4-3 highlights the proposed dwelling units per acre.

Proposed Building Heights

The most intensive expansion of residential occurs south of Tecolote Road, where little to no residential uses currently exists. The proposed maximum height is 50' – 60' (approximately five to six stories). The focus of any increased height would be for new development adjacent to transit stations or transit oriented development. New residences and shops in this area would be within a 10 to 15 minute walk of at least one of these stations.

Proposed Floor Area Ratios

A minimum floor area ratio is proposed of 0.25. This is consistent with on the ground conditions and will encourage future growth. See Figure 4-4.

4.4.2 Preferred Land Use Alternative

With regards to the decrease in non-residential space, this could be accomplished over time as existing retail, commercial, or industrial properties are sold and redeveloped into residential land uses instead. The plan does not recommend demolition of any particular building/business, but rather, sets a trend for the overall study area which could be achieved with numerous combinations of existing and new development.

The preferred land use scenario envisions a moderate amount of land use changes paired with moderate to high intensity of development on the changed parcels. The largest areas of change in the preferred scenario include:

- The Bayview Plaza site is proposed to include mixed-use development, including ground floor commercial/retail and upper floors residential over structured parking. The proposed maximum height is 60' (approximately six stories). Significant development on this site is warranted because of the close proximity to the proposed Clairemont station. A study was done based on the proposed land use. The Bayview Plaza site could include the following development program. Sample images are provided for a sense of scale.

Number of Stories	6 stories
Parking Type	Structured
Parking Level	4
Parking Spaces Required	672
Retail/Commercial SF	34,782
Number of DU	277

Street view of one potential design solution to Bayview Plaza site

Aerial view of Bayview Plaza site

- The RV park site along Tecolote Canyon is another site where mixed use development could be considered similar to the Bayview Plaza. The image below highlights the site. Step backs should be incorporated to allow for a visual corridor. The development on the site should be clustered there is a visual corridor through the site & physical access to the creek trail. These strategies would mitigate any new development.

Site plan of RV parks site

- The City Chevrolet site (at Milton Street and Morena Boulevard) is envisioned as converting to multi-family residential, with a maximum height of 60', although the edges along Morena and near the surrounding neighborhoods could transition to 20' – 30'. This change of use would occur only if the dealership decided to relocate.

- No changes are proposed at the business hub near Ashton Street/Napier Street to encourage development similar to the existing uses. One potential change is the replacement of the fast food restaurant with a small public park.
- Other properties along Morena between Tecolote Road and the north split with West Morena are converted to multi-family with a maximum height of 60'.
- The area around the proposed Tecolote station increases residential uses between Morena and West Morena as in the conservative scenario, and further expands the mixed-use residential/retail uses west of West Morena. In this scenario, the residential/retail includes the current sites of Toys R Us, Petco, Jerome's, and A-1 Storage. The maximum height for development in this area is 60'. This area is a key location for additional density as it borders the proposed station site and represents some of the largest individual parcels in the corridor, allowing for larger individual developments.
- The area near the existing Morena station increases both residential and mixed-use land uses. Under this scenario, two new high density residential nodes are created: one southeast of Cushman Avenue and Morena Boulevard and the other southwest of Sherman Street and Morena Boulevard. In addition to these nodes, a mixed-use residential/office node is created north of Linda Vista Road and Napa Street. These locations are ideal for higher density development because of their close proximity to the Morena station, as well as USD. The siting of additional office in this location is directly tied to the anticipated need for office near the university. The maximum height for all these nodes is 60'.
- The preferred scenario also proposes the retention of and reinvestment in existing retail uses between Morena and West Morena (between the south split and Tecolote Road) and along the east side of Morena just south of the south split. This is envisioned as the core of the "Design District" and will create continuity in the character of the neighborhood as residential uses are introduced.
- The preferred scenario also envisions the retention of existing commercial/restaurant uses along the east side of Morena Boulevard (between Linda Vista Road and Tecolote Road).

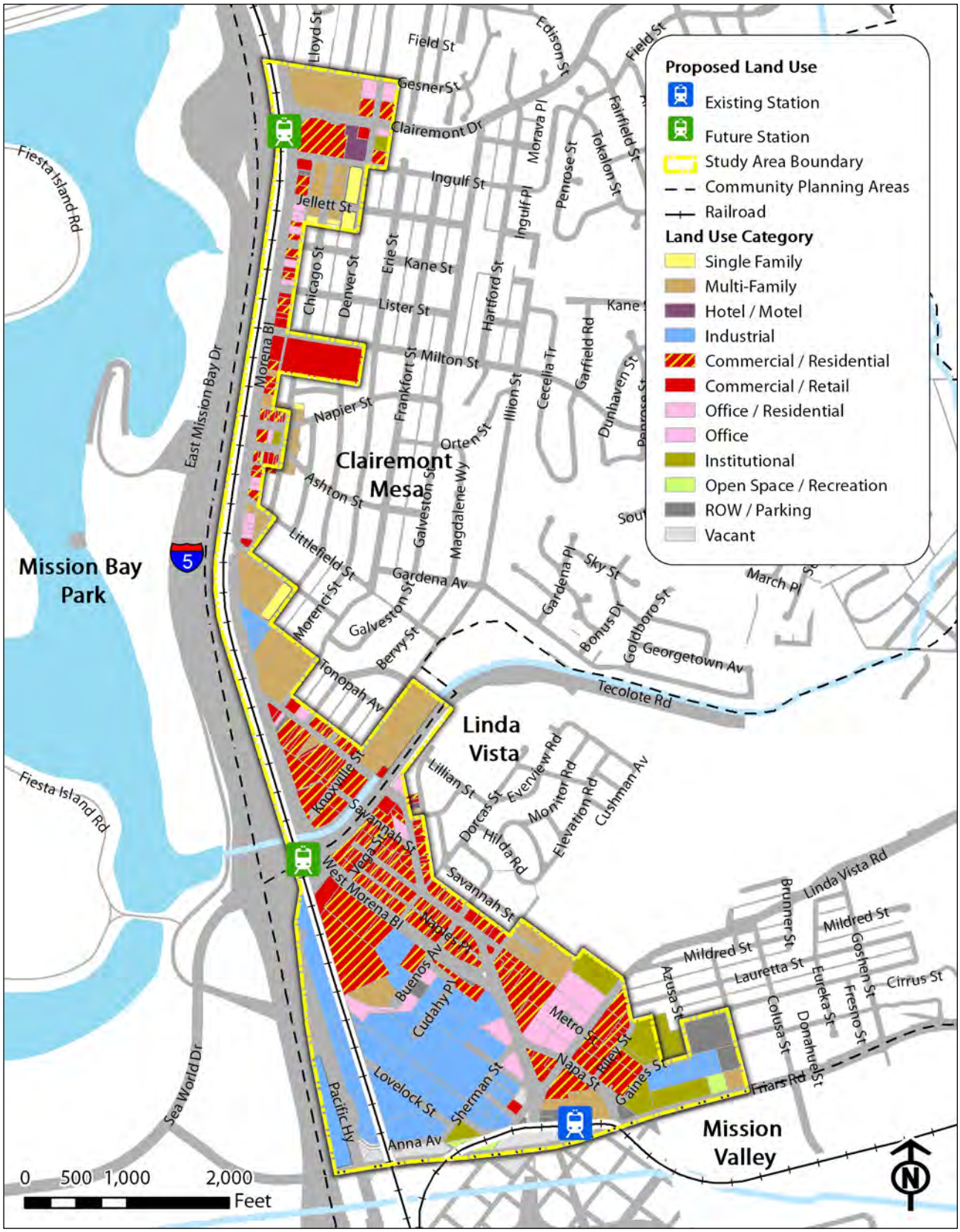


Figure 4-2: Proposed Land Use

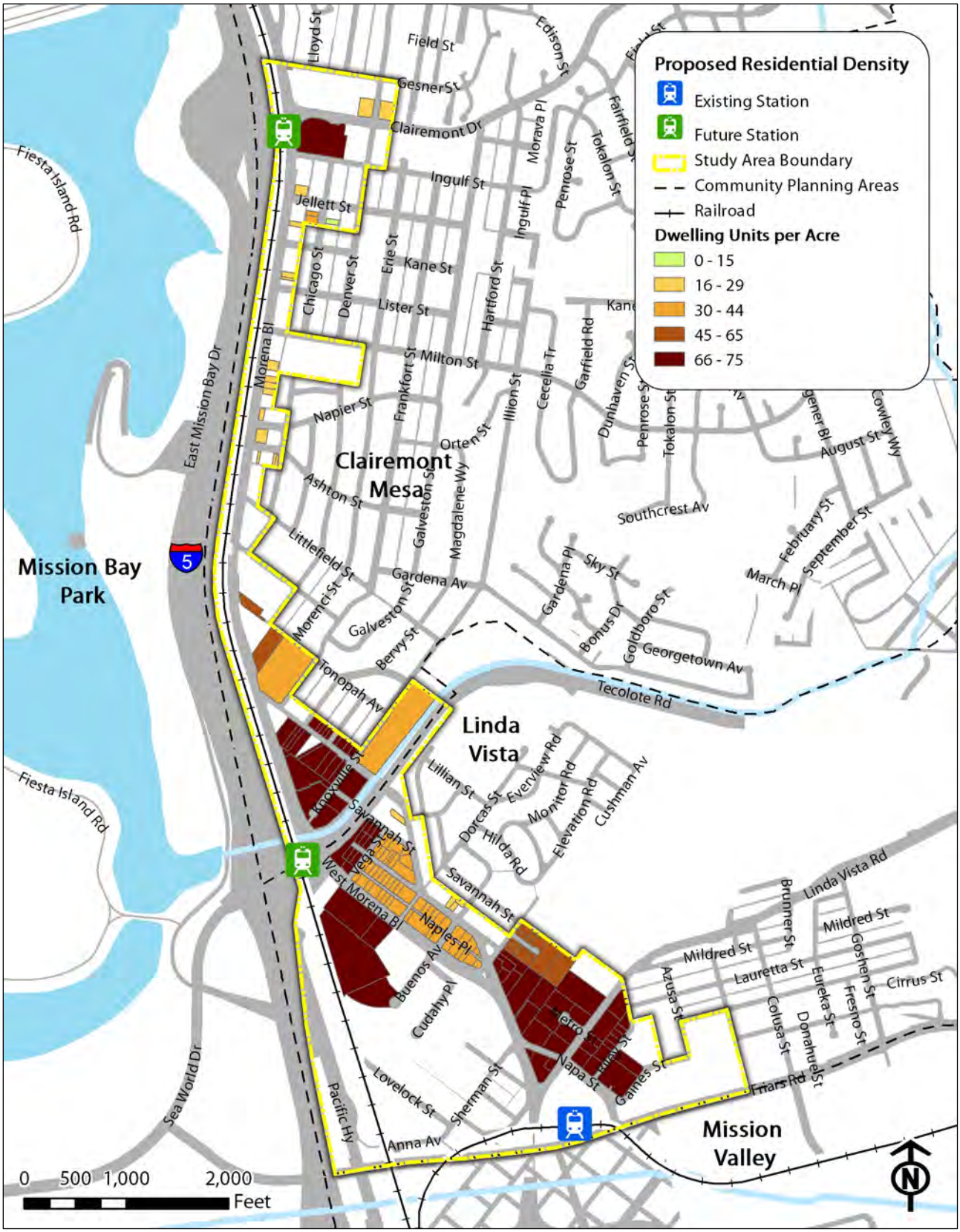


Figure 4-3: Proposed Dwelling Units per Acre

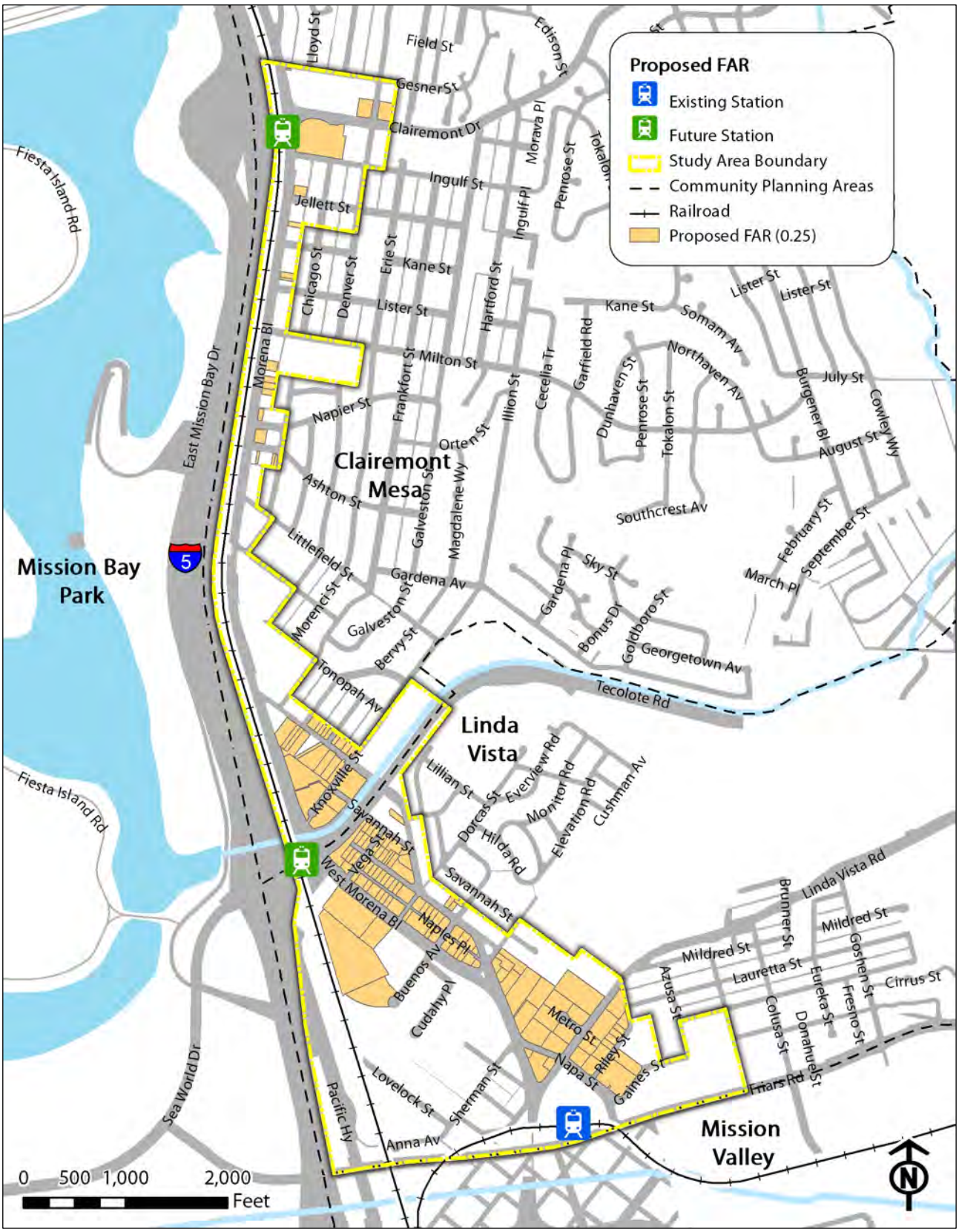


Figure 4-4: Proposed Floor Area Ratio

4.5 Market Assessment

The development program for the Project would result in an increase of 4,718 dwelling units of various types of residential, and a *decrease* of approximately 164,000 square feet of retail and 492,000 square feet of office space (See Table ES-1). The decrease in existing commercial space is necessary in order to create the development sites for new residential, commercial, and mixed-use development. Most of the commercial space that would be demolished is economically obsolescent, and therefore is not generating the level of fiscal revenues, employment, and other economic benefits possible based on current market trends. It is worth noting that while the Study area would experience a decrease in commercial square footage, this does not impact the ability of the City to retain and increase its office-based employment and taxable retail sales; this activity would be expected to shift to other parts of the City, based on the availability of sites elsewhere to accommodate these uses.

Table ES-1: Project Development Program
(figures in parentheses indicate a decrease)

Land Use/Product Type	Project
Residential Dwelling Units	
Community Village	1,610
Residential - High	2,076
Residential - Medium High	966
Residential - Medium	66
TOTAL: Residential Dwelling Units	**4,718**
Commercial Square Feet	
Community Village - Retail	(164,016)
Community Village - Office	(492,049)
TOTAL: Commercial Square Feet	**(656,065)**

Sources: KTU+A; BAE, 2013.

Table ES-2, below, summarizes the net annual fiscal impact to the City's General Fund at full build-out for the program in Table ES-1. There would be a minor net negative fiscal impact (deficit) of approximately $229,000 per year at build out. While this may seem more than a minor amount, in terms of the City's $1.2 billion annual General Fund, it represents a deficit of 0.02 percent (two one-hundreds of one percent). This amount is well within the normal budgetary variation that can occur from year to year in either revenues or expenses. It is reasonable to expect that net revenues from other more intensive commercial areas of the City, such as Mission Valley and Downtown, could more than offset the negative fiscal impact that could occur in the Study area at build out. The Study area could be complementary to these areas by offering more housing choices to employees who work in these areas.

Table ES-2: Summary of Project Net Fiscal Impact

City of San Diego General Fund Fiscal Impacts	Project
Net New Revenues	$3,808,462
Less Net New Service Costs	($4,037,647)
Net Fiscal Impact: Surplus / (Deficit)	**($229,185)**
City of San Diego FY2014 General Fund Budget (a)	$1,200,367,373
Net Fiscal Impact as % of General Fund	**-0.02%**

Notes:
Excludes capital costs, or mitigation payments, impact fees, etc. to fund new capital costs.
(a) FY2014 General Fund expenditure amount. This is slightly higher than revenues due to fund balances, as noted in the budget report.

Sources: City of San Diego; BAE, 2013.

It should be noted that an average cost approach was used to project new fiscal costs for police and fire services, due to a lack of more detailed information

that could be provided by those departments. Average cost methods can overestimate the new fiscal costs for police and fire services that result from new development. This means that a more detailed study based on further assessment of the exact timing and need for new facilities, personnel, and other costs might reduce the projected net fiscal impact to a lower figure.

The above projected fiscal impact would only occur at full build-out, which could be 15 to 20 years or more in the future. Development proceeds in tandem with general economic growth and market cycles, and periods of active development are followed by periods with minimal new development. Future market shifts may also change the findings in this report.

This fiscal impact analysis is limited to annual General Fund operating revenues and costs, and does not evaluate capital improvement costs associated with Study improvements, project mitigations, or new municipal facilities. It is assumed that these capital costs would be covered by a combination of developer mitigations, development impact fees, grant funds, and other capital funds typically used by the City.

5 Urban Design

Urban Design addresses how neighborhoods and the built environment are formed. The MBAP expresses the character of the study area through a composite of elements including districts, corridors, edges, gateways, landmarks, landforms/topography, and views. These elements together influence the design of the Study Area.

Urban design is about making connections between people, places, urban form, nature, and the built fabric. Urban design draws together the many strands of place-making, environmental stewardship, social equity and economic viability into the creation of places with distinct beauty and identity. It draws these elements together to create a character for an area. Figure 5-1 highlights the built form of the study area. It looks at the opportunities for views, gateways, districts, and edges. It also identifies potential landmarks if any in the Area.

Views

The views to the view on Clairemont Drive and from Morena Boulevard are important. Keeping these views is a high priority for the community.

Gateways

Gateways can be signage, monuments, a literal gateway, or building to articulate entrance. There are many different ways that gateways can be introduced in to an area.

Districts

Specific districts will be discussed later in this chapter. However, a district is an area that has a highly consistent character by prescribing specific building design requirements and streetscape elements.

Edges

Edges are a key part of urban design. Edges are not necessarily physical edges but rather places in the street where intensity of land use changes or there is a difference in building style or transition from public realm to private realm. Figure 5-1 highlights the edges in the Study area.

Landmarks

Currently there are no landmarks in the Study Area. However, there are several potential landmarks that could be considered by the community. These areas could include the Ashton Commercial Property which was once considered the neighborhood center of the Study Area.

5.1 Urban Design Vision

The urban design vision was set by the community in the Existing Conditions Workshop. The community worked together to identify key opportunities in the Study Area to enhance how future growth is built. The vision statement below is from the workshop and has guided the urban design guidelines.

Create an attractive and inviting mixed-use center that builds upon the current feeling of the corridor while creating a defined community identity that includes unique signage, gateways, public gathering spaces, street trees, and landscaping.

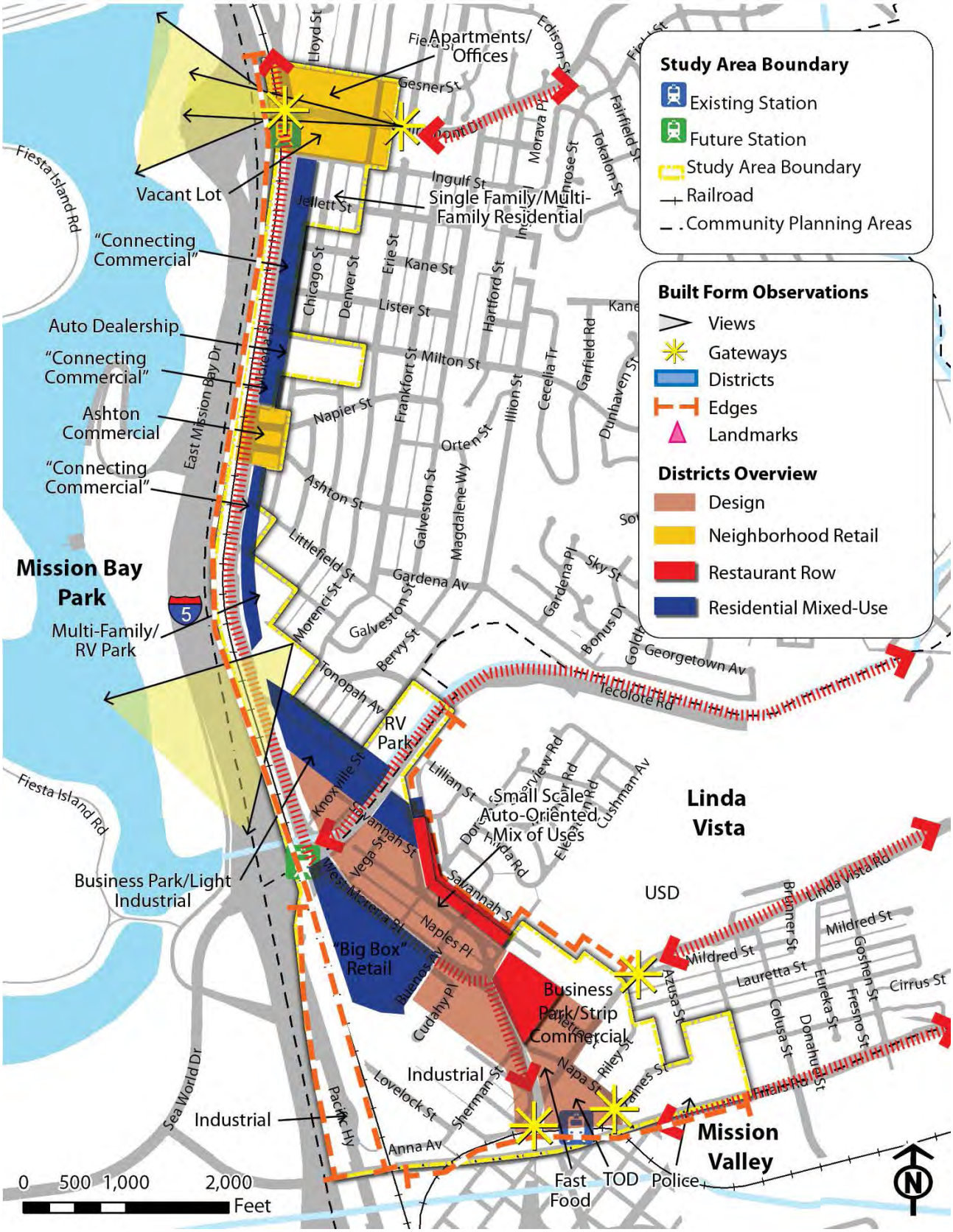


Figure 5-1 Built Form Map

5.2 Urban Design Guidelines

These urban design guidelines are intended to respect and reconnect to the historic development patterns of the Greater Morena Boulevard study area while allowing for new growth and development to occur that enhances the community. These design guidelines ensure that the principles of good neighborhood design are followed. The focus of these guidelines is to identify positive synergies in the street environment. The street environment, also called the public realm, is defined as any publically owned street, walkway, right of way (ROWs), park, open space, building, or facility. In the Morena Boulevard study area there are two applications of how the public realm impacts good neighborhood design: 1) places within the public realm where streetscape elements come together to define a specific character; and 2) places where the public realm elements interface with the private realm elements.

These design guidelines discuss the public realm guidelines, guidelines for good street design as they relate to the pedestrian experience, distinct character districts in the study area, and public to private interface guidelines. This section is organized by the following topic areas:

- Public Realm
- Street Design
- Street Landscape
- Street Furnishings and Materials
- Pedestrian Facilities
- Public Gathering Places
- Wayfinding Signage and Gateways
- Districts Guidelines
- Public to Private Interface Guidelines

5.3 Public Realm (Public Street ROW)

The public realm represents the largest public space resource in the Morena Boulevard study area. The street from property line to property line takes up more space than the parks, USD, and other public facilities combined in the study area. Streets are the connections to neighborhoods, as well as paths to work, school, and play. Streets are the primary contact with the outside public realm for drivers, pedestrians, bicyclists, and transit riders.

These guidelines recognize the importance of street design to facilitate movement as well as encourage healthy physical and social interactions. The right combination of public realm elements results in comfortable, shaded pedestrian walkways, safe bicycle connectivity, and efficient vehicle flow. Street design should connect people to destinations and to each other. Good street design in the public ream can bring together people and places connecting by car, bike, foot, and transit. Streets need to move traffic, but they should be efficient and attractively designed public spaces that can positively impact the community and the environment.

Figure 5-1 shows the public realm. It identifies a pedestrian zone that includes the sidewalk and parkway and a multi-modal zone that includes on-street parking, bicycle, and vehicle flow.

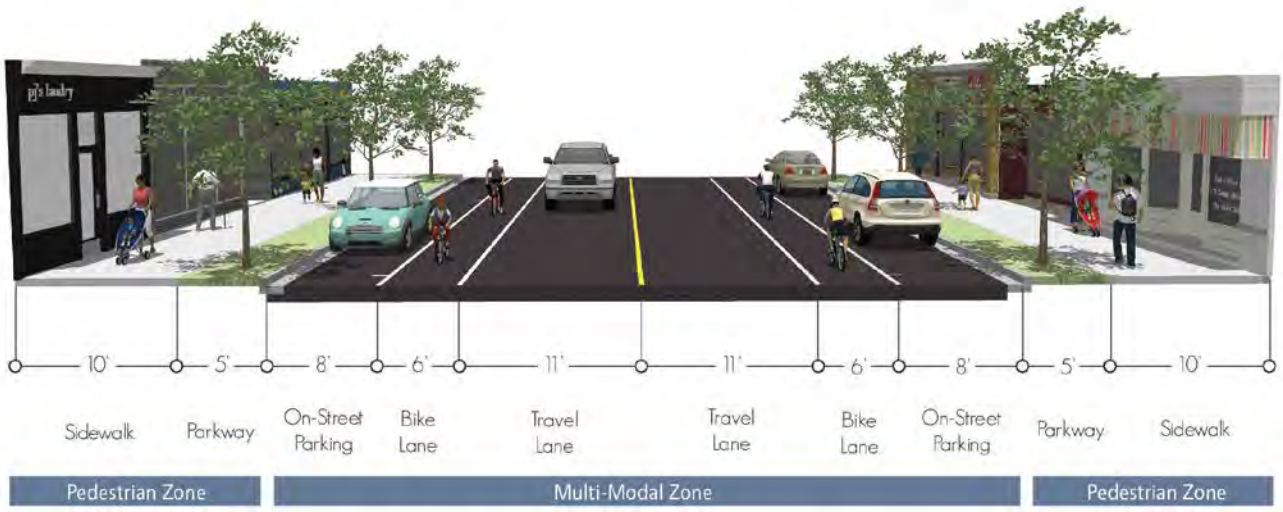


Figure 5-1: Public Realm Elements

5.3.1 Street Design

Considered as a single unit, streets represent the largest single public asset in most urban areas. The design of a public street has the potential to completely transform the image of a community, while also improving functionality and quality of life.

Although street design is commonly thought of as just what is occurring between two curb edges, the safety and quality of life in a community is tied to good street design. Street design must consider vehicle, bicycle, and pedestrian connectivity and the experience of each of those users. The streets of the study area are currently geared towards vehicular movement. Street design varies greatly within the study area, with some streets exhibiting a very narrow right-of-way, while others have excessive width.

The vision for the public realm includes the sidewalk, parkway, on-street parking, bike facilities, travel lanes for vehicles, and medians, when possible. Street design dictates what uses are accommodated in which zone. Street design includes transforming these auto-oriented thoroughfares into attractive public spaces retrofitted to support sustainably principles and accommodate a wide range of users. These guidelines address the pedestrian zone to include the sidewalk and parkway, and the multi-modal zone to include on-street parking, bike lane, travel lane, and median, when applicable. The various elements and treatments in these two zones determine the character and positive impacts of street design. Recommendations and guidelines for the multi-modal zone are discussed in Section X.X per the recommendations for mobility. Guidelines are provided here for the multi-modal zone only as they relate to the pedestrian experience and interface.

In addition to the guidelines identified in this study, streets and roadways in San Diego are guided by the standards included in the City's Street Design Manual (SDM). The SDM identifies three major street classifications for the streets and roadways in the study area. The following streets highlighted below are a part of the SDM. Refer to the SDM for additional information on street classifications and see Section X.X for details on specific mobility recommendations for each of the streets listed below.

Four Lane Major Roadways

- Linda Vista Road
- Napa Street
- West Morena Boulevard

Two Lane Collectors

- Milton Street
- Morena Boulevard
- Tecolote Road

Locals

Local Streets are the most basic street type in the study area. Any street not specifically identified as a Major Roadway or Collector is a Local Street.

5.4 Pedestrian Zone

The pedestrian zone is comprised of the sidewalk and planting area or parkway. Figure 5.2 highlights the sidewalk and planted parkway. These two parts work together to provide a continuous pedestrian route, access to businesses, and activation through outdoor uses such as public seating or cafes. This zone includes the following streetscape elements:

- Urban Forestry
- Urban Runoff
- Pedestrian Lighting
- Signage and Wayfinding, including Entrance Gateways
- Street Furnishings, including Waste Receptacles and Benches

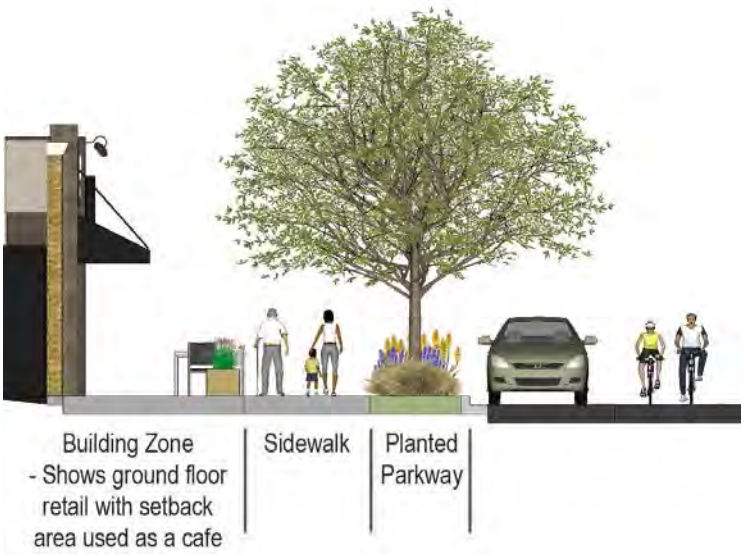


Figure 5-2: Pedestrian Zone

5.4.1 Sidewalks

Sidewalks can range in width depending on the surrounding land uses and intensity of vehicle, transit, and bicycle use in the street. The sidewalk is the primary means of pedestrian access and a minimum clear unobstructed path of travel should be clearly identified and kept clear of any obstructions, especially utilities.

- For streets where the building frontage is more than 25% commercial, the sidewalk width shall be a minimum of six feet. A separate minimum five foot parkway shall be provided. The parkway can utilize trees in tree grates to provide an expanded walking surface or can incorporate plants and urban runoff strategies into a planted parkway.
- For streets where the building frontage is more than 75% commercial: sidewalk and parkway together (pedestrian zone) shall provide a minimum width of 15 feet and include trees in tree grates. A clear, unobstructed accessible path of 10 feet shall be provided. Utilities and other potential ADA impediments cannot be located in the clear accessible path.
- For streets where the building frontage is more than 75% residential: the pedestrian zone shall include a minimum five foot clear, unobstructed path of travel on the sidewalk. The path of travel must be free of utilities, street furnishings, or any other physical impediments. A separate, planted parkway of five feet shall be provided in addition to the sidewalk.
- The materials chosen for sidewalks and other public areas can greatly enhance the aesthetic quality and sense of identity of an area. Variations in color and texture are encouraged, especially in retail areas. Potential surface treatment options that should be utilized within the study area include:
    - Permeable pavers
    - Permeable asphalt or concrete
    - Concrete with acid wash
    - Stamped patterns

- Whenever possible, increased permeability should be integrated into pedestrian zone design. Permeability in the sidewalk can decrease flooding in retail areas, particularly at intersections. When combined with urban runoff strategies, the runoff captured can be used to slow and treat contaminants through below surface soil and plant roots.

5.4.2 Parkways

Parkways or planting areas are a part of the pedestrian zone. It is an area that incorporates the majority of the streetscape elements. The parkway acts as a physical buffer between the sidewalk and the edge of the multi-modal zone. It has vertical elements such as urban forestry, lighting, and furnishings that can provide visual cues that drivers need to slow down. The parkway shall include a variety of street amenities.

- See Section 6.2.1 Sidewalks for specific information on parkway widths.
- For planted parkways, refer to Section 6.4 Urban Runoff and Section 6.3 Street Landscape section for information on trees, shrubs, and ground cover.
- For parkways that act as an extension of the sidewalk, incorporate trees in tree grates and urban runoff strategies from Section 6.4Urban Runoff.
- Parkways should not be filled in with concrete.
- Parkways should include trees and ground cover. See 6.3.1 Street Trees for recommendations.

Planted parkway with shade trees & ground floor retail uses

5.5 Street Landscape

Street landscape guidelines are important for planted areas in a street. The planted areas have many benefits, including environmental benefits, as well as physical and psychological health impacts. The presence of trees, plants, and nature can create an attractive street while providing shade, more oxygen, and reducing air pollutants.

- For areas with existing landscaping, care should be taken to create views through existing landscaping. Removal is not a preferred solution.
- Select landscaping for durability and easy maintenance.
- Regional native and drought-resistant plant species are encouraged as plant materials.
- Careful plant selection can provide visual cues and physical deterrents to areas where pedestrian access is not desired. Use thorny or thick plant materials in perimeter landscape areas to discourage pedestrians from cutting through parking areas, trampling vegetation, approaching ground-floor windows, or climbing fences and walls.
- Landscaping and hedges should be used to minimize adverse impacts such as litter, noise, odor, glare or lighting impacts between adjoining residential and non-residential land uses.

5.5.1 Street Trees

Trees and groundcover are integral to creating a successful pedestrian zone and street design. Consistent tree planting creates an urban forest and also results in a canopy that can provide shade, as well as numerous environmental and psychological benefits to residents and visitors. A well landscaped and designed street can increase retail revenues and property values. Plant materials shall be incorporated into the parkway, median, and any other plantable areas, such as bulbouts.

- See the City of San Diego Street Tree Selection Guide (provide a link?) for recommended species.
- The size of the tree shall be a minimum of two inches in caliper with a clear zone between the top of pavement and bottom of limb of eight feet.
- Street trees shall be planted at a rate of one 24" box for every 35 feet of property line that abuts the public right-of-way.
- 40 square feet of water and air permeable landscape area shall be provided at the base of each street tree. This area must not have an impervious surface. The area shall be protected with either a tree grate or shrubs and mulch.
- Tree grates shall have a minimum 12 inch diameter opening for the tree and shall not have any other openings greater than ¼".
- The space between the tree grate and the finish grade of a tree shall be filled with gravel larger than ¼" to limit the accumulation of debris.
- Root barrier will be used to direct tree roots away from hardscape surfaces.

Parkway adjacent to parkway that uses tree grates and planted areas

5.5.2 Groundcover and Shrubs

Planted areas should incorporate plant material into planted parkways and medians. Unless incorporating stone or cobble, low plants should be carefully selected to enhance the street environment.

- Groundcover and shrubs should be carefully selected for drought tolerance and native conditions. Refer to the San Diego County invasive ornamental plant guide (provide link?) for recommendations.
- A maximum height of 30 inches should be maintained from the bottom of the plant to the top of the plant for visibility.
- If the street is within 250 feet of a drainage inlet or environmentally sensitive area, the plant palette must be approved by City's Community Forest Advisory Board.
- Designed landscaped areas shall not block views to buildings when grown to full maturity. (Not sure I agree with this)

5.6 Urban Runoff

Proper control of urban runoff is an important part of street design. It is not usually a visible enhancement, but its benefits can be far reaching. Urban runoff strategies shall be incorporated into any planted area, as well as adjacent areas where there is an

opportunity to capture and treat stormwater and dry weather runoff. These areas include the sidewalks, parkways, medians, bulbouts, and on-street parking areas.

- Projects should incorporate porous materials on walkways, driveways and parking areas to minimize stormwater runoff from paved surfaces.
- Sidewalks shall incorporate permeable surfaces through the use of ungrouted pavers, permeable concrete or asphalt. These surfaces shall be in used in conjunction with structural soil, Silva cells, filterra treatments, or other runoff capture devices.
- All planted areas shall incorporate urban runoff strategies. The strategy can range from filtering soils to a structural soil with sub surface drain. Parkways, bulbouts, and planting areas can be used to capture runoff. Strategies include curb inlets, bio-retention soils, and plants that can capture and treat contaminants before being released to the storm drain system.
- On-street parking can use permeable asphalt or concrete to capture urban runoff.

Image above highlights the use of Silva cells with tree grates and expanded sidewalk

5.7 Street Furnishings and Materials

Street furnishings play an important role in the pedestrian zone and the pedestrian relationship to the vehicular environment. The verticality of street furnishings provides visual friction to a driver and cues the driver to slow down. In addition, street furnishings can provide some amount of physical barrier between the pedestrian path of travel and the vehicle path of travel. The various street furnishing are discussed in the following sections.

5.7.1 Pedestrian Lighting

Lighting is an important part of the street. Lighting provides visibility and lighting standards can enhance the street environment significantly by providing objects at a human scale.

- Utilize vandal-proof lighting. Light fixtures should be easy to maintain and replace as needed.
- Lighting standards shall be consistent with designated branding for the street character. The pedestrian lighting shall be provided separate and in addition to vehicle lighting. The lighting standards shall be at a human scale with a maximum height light standard of 15 feet.
- Pedestrian scale lighting shall be provided at a regular spacing. Parkways shall include pedestrian lighting to provide 0.8 foot-candles average luminance along the path of travel. Provide adequate lighting for pedestrian areas, access points, sidewalks, pathways, plazas, parking areas, and building entrances to improve public safety and security in these areas. Avoid overly bright light, which can reduce security by create dark shadows and visibility issues.
- The pedestrian lighting elements shall be included at the edge of the parkway so it sheds light on the sidewalk.

- Site, direct, and/or shield light fixtures to prevent light pollution through glare or light spillage. Lighting strategies, including shields on luminaires, that minimize light pollution and glare on adjacent properties should be implemented.
- Up-lighting is discouraged on areas of buildings that have substantially specular facades (such as glass or other highly polished material) due to undesirable light scatter.
- Support sustainable lighting design objectives by encouraging effective and efficient use of energy through new lighting technologies and renewable energy sources.

5.7.2 Public Seating

Seating is an element which encourages activity and habitation of the public realm. Seating can take many forms and be designed to suit almost any environment. Examples of seating appropriate for the following locations are listed below:

- Street benches shall be provided at regular intervals but at a minimum at all transit stops. See MTS standards (provide a link) for street bench minimum guidelines at transit stops. Benches should match the branding of the street in color and style.
- Wall seating can be incorporated to building designs, or low walls can be placed to provide public seating. Seating should be incorporated into the design by the building owner.
- Public seating can also include community art opportunities.

5.7.3 Trash/Recycle Receptacles

Trash and recycle receptacles are important to keeping streets clean. Waste receptacles and separate recycling receptacles should be encouraged. Both waste and recycling receptacles are an excellent opportunity for a community art project or introduction of a color.

- A trash and recycling receptacle shall be provided two per block, one on each side of the street for residential streets (is this just for streets with multi-family residential, I don't think you want this in single family neighborhoods).
- Blocks with more than 50% retail frontage shall provide separate trash and recycling receptacles (four per block, one at each end of the block on each side of the street).
- Trash and recycling receptacles shall be consistent with branding and the City of San Diego requirements for maintenance and trash collection. Refer to the City of San Diego for receptacle standards (provide link).

5.8 Pedestrian Facilities

Pedestrian facilities refer to any amenity that helps facilitate walking. This section discusses pedestrian facilities that shall be included as part of the pedestrian and multi-modal zones. A number of these pedestrian facilities span across both zones to allow for safe pedestrian access across a street.

5.8.1 Curb Extension (Bulbouts)

Curb extensions (also called bulb-outs) extend the sidewalk into the on-street parking lane to narrow the roadway and provide additional pedestrian space at key locations. They can be used at intersections and at mid-blocks to provide a pedestrian crossing. Curb extensions enhance pedestrian safety by increasing pedestrian visibility, shortening

crossing distances, slowing turning vehicles, and visually narrowing the roadway. Refer to the City of San Diego General Plan Mobility Element –Traffic Calming Toolbox (provide link).

- Curb extensions can incorporate an area for landscaping, public art, lighting, or gateway signage.
- Curb extensions shall be provided for streets that have higher pedestrian and traffic volumes. Lower priority areas for curb extensions include streets with lower pedestrian and traffic volumes and lower speeds, such as neighborhood residential streets and alleys. However, they may be considered on these street types as well.
- Curb extensions should not be used on streets without a parking lane, or that have a peak period tow-away parking lane.
- Curb extensions may be placed at transit stops. Where curb extensions are provided at transit stops, they should be a full-length transit bulb, and not a standard corner bulb, as it can be difficult for a bus to exit or re-enter traffic around a corner bulb-out.
- Mid-block curb extensions are an important part of pedestrian facilities. They should include bollards, landscaping, or other buffers between pedestrians and passing vehicles, designed to not impede a driver's view of pedestrians.
- Mid-block curb extensions should use special paving or an edging treatment to distinguish the space as a plaza space separate from the through travel area.
- Street furnishings and other above-grade objects should be located on curb extensions where space allows, increasing space for pedestrian through travel on the sidewalk.
- Mid-block curb extensions should be used at designated mid-block crossings. Mid-block crosswalks should be provided.

Image above shows a curb extension with curb ramp, planted parkway, sidewalk, and transit treatment

5.8.2 Curb Ramps

Curb ramps (wheelchair ramps) provide access between the sidewalk and roadway for people using wheelchairs, strollers, walkers, crutches, handcarts, bicycles, and also for pedestrians with mobility impairments who have trouble stepping up and down high curbs. Curb ramps must be installed at all intersections and midblock locations where pedestrian crossings exist.

- While curb ramps are needed for use on all types of streets, priority locations are in downtown areas and on streets near transit stops, schools, parks, medical facilities, shopping areas, and near residences with people who use wheelchairs.
- Texture patterns must be detectable to sight impaired pedestrians.

5.8.3 Marked Crosswalks & Enhancements

Marked crosswalks are an important pedestrian facility. Marked crosswalks can be installed at the discretion of the traffic engineer (per the City of San Diego) provided that basic warrants including pedestrian volume, approach speed, visibility and illumination are met. Refer to the City of San Diego General Plan – Mobility Element – Traffic Calming Toolbox (provide link).

- Marked crosswalks shall be included at all intersections.
- Striping and patterns can be used to visually enhance the pedestrian crossing.

5.8.4 Transit Amenities

Transit facilities shall integrate Morena Boulevard branding for bus stops and light rail transit stops or stations.

- Each bus stop shall include a shade shelter, bench, and trash and recycling receptacles.
- Transit stations shall include a plaza as well as a bus turn around, shelter, kiosk, seating, and trash and recycling receptacles. Additional amenities shall be provided depending on the number of buses that need to be served and the number of trains served.

Image shows a transit shelter that incorporates wayfinding, signage, and public seating with a shade structure

5.9 Public Spaces

Public spaces are important to the health of a community. Public spaces can include a range of spaces from parks to parklets. All developments should contribute towards public gathering by designing buildings that address the street frontage (See Section XX public to private interface). Parks, plazas, courtyards, parklets, paseos and public services may be used in any combination to fulfill this requirement.

- Public spaces shall consider pedestrian comfort, visibility and accessibility. Public gathering space should be placed next to public streets, residential areas, and retail uses. Public gathering space should not be formed from residual areas. Rather, they should be integrated into the design of the project.
- Designs should utilize building setbacks and arcaded or galleried spaces as an extension of the sidewalk. This space can be used for outdoor seating, street furniture, landscaping, and public art that can enliven the streetscape.
- Public gathering space should be designed for both active and passive uses.
- The grade of public gathering open space should not be more than three feet above or below the sidewalk grade.
- Any walls, planters, or other obstructions (not including trees, lights and steps) that would prevent views into the open space should be limited and generally not exceed a height of 18 inches above the adjacent sidewalk.
- A minimum of 20 percent of the publicly accessible private open space ground area should be improved with landscaping, which may be reduced with the provision of substantial tree canopy coverage. At least one 36-inch box tree should be planted in the urban open space for each 25 feet of street frontage (for linear open space) and/or each 500 square feet of urban open space, whichever is greater.
- Seating should be provided for users in urban spaces at a ratio of 1 linear foot of seating for each 40 square feet of urban open space. The seating may be composed of benches and seating walls. Movable seating is highly encouraged.

- Site amenities, including open-air cafes, kiosks and pushcarts, are encouraged. Food trucks are encouraged to park along the plaza street frontage or in parking lots within the Restaurant Row District.
- Residential and commercial buildings, particularly half-block and full-block developments, should introduce openings in the street wall and extend the public realm farther into the block. Publicly-accessible through-block walkways, courts, pocket parks, plazas, and urban open spaces are strongly encouraged to enhance the richness and variety of publicly accessible open spaces.
- Public spaces shall include lighting and a public art component.

Plazas

- Plazas are a key opportunity for socializing and enjoying the public realm.
- Plazas should be integrated into street corners when possible. Plazas can be incorporated into curb extensions and mid-block bulbouts.
- Plazas are a natural extension of transit facilities and each transit station should provide a public plaza.

Image above highlights a building setback and use of an arcade (building articulation) to incorporate a public plaza at an intersection

Parklets

A parklet is a temporary space that is converted to a public park space. Parklets, though generally considered temporary, are a key part of urban open space.

- Parklets can provide outdoor café seating, as well as seating and retail interest.
- Parklets can be incorporated into parkway space or on-street parking spaces.

Open Space

- Canyons, creeks, and any other environmentally sensitive areas should be conserved as open space amenities.

5.10 Wayfinding Signage and Gateways

Wayfinding is an important part of signage and gateways. A neighborhood coalition or business organization can generate a specific branding. The following section identifies four different branding opportunities based on specific areas of the Morena Boulevard study area. In instances where a specific branding or logo is created, signage and gateways should integrate branding into the streetscape elements.

Directional Signage and Placement

- Signage should be integrated into the street environment through the use of banners, street signs, and wayfinding signage for safe routes to schools and parks.
- Signs should be used to direct patrons to parking and entrances.

Gateways

- Gateways can define the edges of a unique area, whether it is a retail area or neighborhood edge.
- Gateways can be identified by monuments, art pieces, or a variety of other visual markers.
- Gateways should integrate common branding elements based on a specific district or design character.

5.11 Districts

A district is an example of a street design where the public realm elements are intentionally kept consistent to highlight a specific character. There are four districts in the Morena Boulevard study area.

- Design District
- Neighborhood Retail District
- Restaurant Row District
- Residential Mixed Use District

See Section X.X. for details on the specific sections found in the study area.

Image above highlights how two sides of a street form the character and feeling of an area

5.11.1 Ground Floor Uses

There are four districts that have a high priority for consistent street character. In addition, to the design of the street, the interface between the public realm and the design of the building are critical to the success of a district. The relationship between the building edge and the public realm edge can impact the feel of the street and the activity in the street.

One of the defining factors of the districts is the ground floor use of the building and how it relates to the street environment. The primary ground floor uses are commercial or residential. The four design districts focus on the relationship of the building and the street environment. The design district has a commercial ground floor use. The neighborhood retail district brings together residential and commercial ground floor uses. The restaurant row district has commercial ground floor uses. The residential mixed use district has commercial and residential ground floor uses.

Commercial/Retail Ground Floor Uses

- A portion of the front setback may be increased by as much as 15 feet if that setback is used as public space (i.e. outdoor restaurant seating or a courtyard with public access). A minimum of 60% of the front facade should be constructed up to the front setback. Utilize building setbacks for ground-floor retail uses for spillover activity such as outdoor café seating and adequate space for pedestrian movement.
- All commercial uses located at the street level should provide a direct at-grade access from the sidewalk. An entrance should be provided for each tenant street frontage exceeding 50 feet. Where such frontages exceed 100 feet, one entrance should be provided for each 100 feet of frontage or portion thereof. Separate pedestrian entrances for individual tenants should be at least 25 feet apart.
- Building facades over 100 feet in length should include a repeating pattern of at least three of the following building elements: color change, texture change, material module change and expression of a structural bay to provide visual interest at the ground floor level.
- The building lobby for office, hotel or other commercial buildings should be expressed on the exterior ground floor of the building, as well as designed as a clearly defined architectural feature of the building.
- Entries to stores and ground-floor commercial uses should be visually distinct from the rest of the building façade. The use of scale, material selection, glazing, projecting/recessed forms, architectural details, color, and shade devices can all contribute to the visual interest of the ground floor uses and street environment.
- The design, materials and colors of all outdoor street furnishings should complement the associated restaurant/café, including lighting, heat lamps, and tables and chairs. Any fencing or walls used to demarcate outdoor dining areas should be decorative, temporary, and should not be opaque.
- For ground floor uses between 3 and 12 feet above the sidewalk, a minimum of 50 percent of storefront façades should contain windows of clear or lightly tinted vision glass that allow views of the interior space.
- Durable and highly resistant building base materials, such as precast concrete, brick, stone masonry, and commercial grade ceramic, should be selected to with-stand pedestrian traffic.
- Pavement treatments, landscaping, art, signage, screening, and fences should be used as necessary to define ownership of property.
- All building and residential units should be clearly identified using street numbers that are easily observed from the street (numbers should be at least three inches high).

Images above highlight ground floor retail uses and the adjacent pedestrian zone

Ground Floor Residential

- The ground floor of residential building facades should be articulated at regular increments to differentiate individual residential units from each other and from the overall massing of the building, and to express a rhythm of individual units along the street.
- Stoops and landscaping should be provided in front setbacks to provide a buffer between the sidewalk the unit's living areas.
- Ground-floor residential units should be raised between 18-42 inches above the adjacent sidewalk grade to provide an additional buffer.
- A minimum of 25 percent of each street-facing ground-level residential unit between 3 and 12 feet above the sidewalk should possess clear, non-reflective windows.
- Fences and gates should be utilized within the setback area only if they demarcate private open space attached to a residential unit. Solid walls or fences should not exceed a height of 42 inches above grade. At-grade railings (at least 50 percent open) may reach a height of 60 inches. Gates and railings located on stoops or raised patios should not exceed 48 inches in height.
- Each street-facing unit should be identified either on the door or the adjacent wall. ???
- Clearly identify all building and residential units using street numbers that are easily observed from the street (numbers should be at least three inches high).

Integrating the ground floor use and design the building greatly impacts the street environment. Being a good neighbor includes encouraging pedestrian and bicycle activity on the street.

5.11.2 Specific Districts

The following district overviews provide a summary of the key design concepts and character envisioned for each of the four land use districts. The images are intended to aid in depicting the type of new development that is envisioned. The design standards and guidelines contained in this chapter support and strengthen the design concepts described for each district overview below.

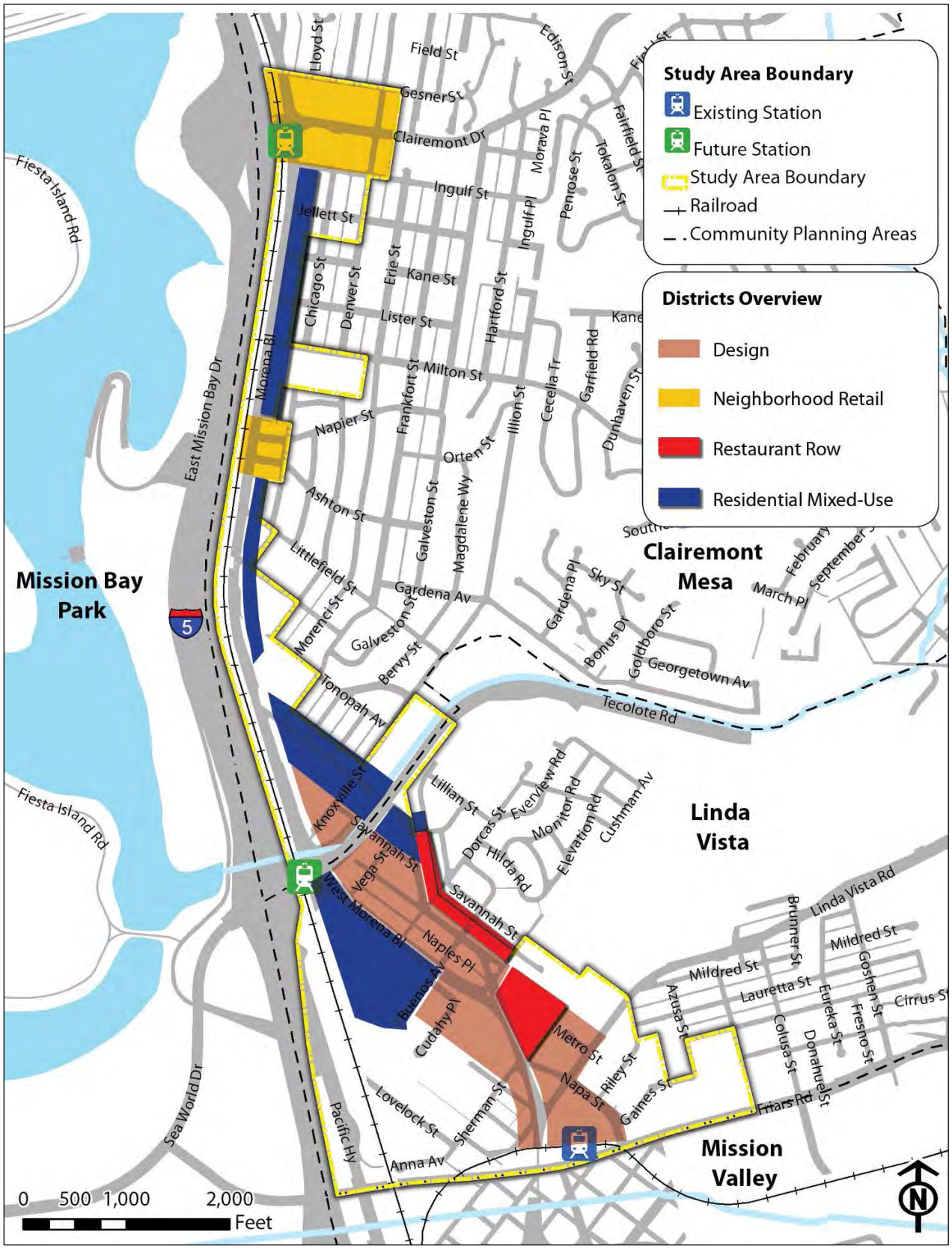


Figure 5-3 Districts Overview Map

5.11.3 Design District Overview

The Design District focuses on the retail and light industrial area that currently encompasses a number of interior and commercial design oriented businesses. This artistic industry is encouraged and it is important that the Design District be supported as place where San Diego residents and visitors can come to purchase materials and services related to their home needs. This district is uniquely situated in the Morena Boulevard planning area and the only other district similar to it is in Mira Mesa.

Urban Design Character

- Larger-scale development pattern
- Banners and uniform streetscape treatment and furnishings to create a sense of place
- Public art to strengthen Design District image

Image above highlights light industrial type uses that can contribute positively to the street environment

Mobility

- Easy traffic flow and automobile access
- Comfortable pedestrian movements and safe crossings

Public Spaces

- A variety of public gathering places such as employee break areas or a central green

Building Form

- Varied setbacks and flexible building frontage allows for landscaping and outdoor sales and display of merchandise in front setback
- Single story buildings

5.11.5 Neighborhood Retail District Overview

The Neighborhood Retail District is an area of Morena Boulevard that focuses on the day –to-day needs of the neighborhood. It is important that as the neighborhood and community grow, that businesses that serve the community remain. While entertainment districts and the like are important, the Neighborhood Retail District is an important facet of Morena Boulevard.

Image above shows a corner entrance to a major grocery store

Urban Design Character

- Pedestrian and bike –friendly environment
- Discourage conventional strip retail development
- Moderate-scale development pattern

Mobility

- Easy traffic flow and automobile access
- Comfortable pedestrian movements and safe crossings
- Parking to side and to rear
- Enhanced pedestrian/bike amenities

Public Spaces

- A variety of public gathering spaces such as plazas, courtyards and outdoor dining

Building Form

- Buildings located along the street frontage to create an urban pedestrian environment
- Multi-story buildings with offices and residences over shops
- Reinforced pedestrian experience with awnings, canopies, recessed entries, galleries, and/or arcades

5.11.7 Restaurant Row District Overview

Restaurant Row District is an area of Morena Boulevard supportive of restaurant uses. The exterior space is especially important in this District in order to support outdoor cafes and an urban market type environment.

Images above show ground floor retail uses through cafes and public plaza areas

Urban Design Character

- Pedestrian and bike -friendly environment
- Finer grain development pattern
- Banners and uniform streetscape treatment and furnishings

Mobility

- Parking restricted to side, internal to lot or to rear
- Enhanced pedestrian/bike amenities (i.e. benches, planters, bike racks, trellises, shaded spaces)
- Reconfigured street design to allow on- street parking along one or both sides of the street. (On-street parking shall count towards off-street requirements)

Public Spaces

- A variety of public gathering spaces, such as plazas, parklets, courtyards, paseos and outdoor dining
- Food trucks encouraged along sidewalk or in parking lots
- Outdoor dining is strongly encouraged within the Restaurant Row district.

Building Form

- Buildings located along the street frontage to create an urban pedestrian environment
- Breaks in street wall allowed for courtyards, paseos and outdoor dining
- Low-moderate building profile

5.11.9 Residential Mixed-Use District Overview

The Residential Mixed-Use District is an area that focuses on residential homes that support an excellent quality of life. The focus in this district is to provide an attractive place to live that provides the many positive amenities of urban living such as a walkable and bikeable neighborhood with close proximity to transit and a blend of retail and neighborhood businesses.

Image above shows a mixed use building with ground floor commercial

Urban Design Character

- Urban transit-oriented environment
- Pedestrian and bike -friendly environment
- Moderate – larger scale development pattern

Mobility

- Connections to Mission Bay and Tecolote Canyon
- Connections to adjacent residential streets
- Restrict parking to side, rear, or internal to the lot

Public Spaces

- A variety of public spaces, such as roof gardens, plazas, courtyards, a central green and/or promenade

Building Form

- Buildings located along the street frontage to create an urban pedestrian environment
- Reinforced pedestrian experience with awnings, balconies, recessed entries, galleries, and/or courtyards
- Multi-story buildings with residences over shops, restaurants and services

5.13 Public Realm to Private Interface

A building is an important contributor to the street environment. The architectural style and design of the building is an expression of the owner's desires. These design guidelines do not focus on the style or expression of the building. However, buildings also need to act as a good neighbor within the context of street design. Instead, these guidelines pertain to the parts of the buildings that impact site design and ultimately affect the scale, character, and pedestrian friendliness of the public realm. The intent is to encourage high quality design of buildings and public spaces that will create an inviting and visually interesting neighborhood.

- The design of new developments or projects should respect the scale, form, and development pattern of existing and planned residential neighborhoods and development within and adjoining the plan area.
- To establish continuity between land uses, all new developments in the project area, regardless of size or use, should reflect a similar urban form that is human-scale and pedestrian-oriented, with strong physical and visual connections to fronting streets.

The Public Realm interfaces with the Private Realm at the street, ground floor use, alley, parking, and curb conditions.

5.13.1 Massing

All buildings can impact the character of a street and neighborhood through its massing and articulation. It is important that new projects/developments act as good neighbors and ensure that they do not negatively impact the character of a neighborhood.

- Encourage positive transitions in scale and character at the ground floor interface between residential and nonresidential land uses. Upper stories should be stepped back along the following key corridors: Linda Vista Road, Clairemont Drive, Milton Street, and Tecolote Road. Stepping back these buildings along these corridors will reduce massing and preserve

Image above shows how a large building can stand out when building massing and articulation are not considered

important views to USD and Mission Bay.

- Buildings should incorporate a variety of vertical and horizontal step backs to break up continuous horizontal or vertical volumes.
- Encourage upper-story step backs to introduce an increased number of floors. Provide a vertical transition between high-density development and any adjacent lower density development. This can be accomplished by varying the massing within a project, stepping back upper stories, using balconies, and varying sizes of elements to transition to smaller-scale buildings. Buildings should have variations in rooflines to diminish building massing.
- Step down building heights along the secondary frontage and rear of buildings to reduce the impact on adjacent properties. Stepping back upper stories will also minimize shadows cast on public amenities and lessen privacy concerns with adjoining lots/neighbors.
- Utilize step back areas to encourage active uses such as balconies or roof gardens. These areas provide additional open spaces for residents and add more "eyes on the street". Courtyards and balconies break up massing and enliven streetscapes.
- Development on either side of streets (facing each other) should be designed at a compatible scale and massing to encourage a comfortable pedestrian environment and maintain a sense of visual cohesion along the street.

Being a good neighbor includes providing upper story step backs at the street, alley, and parking. Step backs should be used any time there is a two story change or more.

- Buildings should be designed to allow natural ventilation using courtyard designs, arcades, canopies and other passive space-cooling techniques.
- Building heights shall relate to adjacent sites to allow maximum sun and ventilation, as well as protection from prevailing winds, and to enhance public views and minimize the obstruction of views from adjoining structures.
- Building heights should promote more active commercial centers, support transit, and encourage development that addresses the street.

5.13.2 Building Articulation

Building articulation discusses the parts of a building and how it forms the whole. Articulation breaks up the volume and shape of a building. The articulation reveals how the surface or form of a building is defined through shade devices, balconies, windows, and all the meaningful parts that define the building's character.

- Buildings should incorporate arcades, trellises, horizontal shading devices and appropriate tree planting along the base of the buildings. Vertical shade elements should be emphasized on the southern and western sun exposure.
- Blank building walls are not acceptable. No greater than a ten foot horizontal space shall be allowed with some change in building articulation through

Image above highlights a change in materials at the ground story and use of windows and entrances at the street

color, attachment, vertical piece, or the use of perimeter landscaping (e.g., foundation plantings or wall vines). Unavoidable blank walls along public streets or those viewed from public streets, open spaces and thoroughfares should use graffiti-resistant surface materials and enhanced with architectural detail in material texture, ornamentation, landscape treatment and/or artwork.

Being a good neighbor includes pedestrian scale building articulation. This includes windows, displays, entrances, and change in materials for visual interest.

- Ground floor frontages adjacent to public streets or open spaces should be articulated with entrances, lobbies, storefront windows, and displays to avoid blank ground-floor facades.
- Arcades, porches, bays and balconies are encouraged. In no case shall the ground floor façade of a building consist of an unarticulated blank wall or an unbroken series of garage doors.
- Ensure that building materials and colors are aesthetically pleasing and compatible with the character of surrounding buildings.

Windows

- Orient active portions of buildings and facades with windows to allow for surveillance of exterior areas, particularly plazas and other public spaces where people may gather. Windows should be positioned to enhance public views and views of streets and public places to allow residents and employees to more easily watch over the street.

Visibility at the ground floor is an important part of the street experience

- Maximize windows to provide visibility of adjacent public spaces. Building facades that face public areas should have a minimum of 50 percent transparency. The view out of windows should not be blocked by shelving and displays.
- Window placement should relate to adjacent sites to allow maximum sun and ventilation and enhance privacy between buildings.
- Operable windows should be used wherever possible to allow passive ventilation, heating, and cooling.

Entrances

- Primary building entrances on all buildings should face the primary abutting public street or walkway, or linked to that street by a clearly defined and visible walkway or courtyard. Additional secondary entrances should be oriented to a secondary street or parking area.
- Limit building entry points to locations where they are easily visible and accessible from public areas. Accentuate building entrances with architectural elements, lighting, and/or landscaping.

Entrances should encourage pedestrian activity

- Provide on-site connectivity to provide the pedestrian safe passage from the sidewalk to a continuous path which connects the primary entrances of the structure(s). Provide clear and continuous paths from every primary building entrance to all sidewalks, crosswalks, transit stops, and parking lots directly adjoining the site.
- Encourage awnings, overhangs, and arcades along commercial facades to provide overhead protection for pedestrians and to create significant entrances.
- Awnings, decorative roofs, and miscellaneous entry features may encroach up to eight feet into the front public right-of-way, provided that they are not less than eight feet above the sidewalk. These elements should not extend beyond the curb face.
- Recesses or projections in the building façade surrounding the entrance are encouraged to enhance visibility and prominence.
- Recessed entrances should not exceed 25 feet in width and the face of the door or gates should be within 15 feet of the property line.
- Porches, steps, entryway roofs, roof overhangs, hooded front doors or similar architectural elements should be used to define the primary entrances to all residences.

5.13.3 Building Orientation

- Primary ground floor commercial building entrances should orient to plazas, parks, or pedestrian-oriented streets, not to interior blocks or parking lots.
- Commercial buildings should build to the sidewalk edge, or minimum setback requirement, to bring buildings close to the street and pedestrians.
- Residential buildings are encouraged to build to the minimum setback requirements. This creates a safer and more active street by allowing residents to more easily watch over the street.
- New buildings should provide an appropriate setback to allow rear- and side-yard facing windows on existing buildings to have access to light, air, and usable space between buildings.
- Residential entries in mixed-use buildings should be separate and distinct from commercial entrances.
- If customers, visitors and/or tenants park to the rear of the building, a well-defined and lighted rear entrance is strongly encouraged. If no rear building entrance is provided, a signed and lighted walkway to the front or side building entrance should be provided.

5.13.4 Site Access and Parking

Parking is an important part of any business and is an important factor for residents. Parking should also be discreet, utilize on-street parking whenever possible, and should be reserved for use in the rear or side of sites. Parking lots, spaces, and head-in parking should not dominate the frontage of pedestrian-oriented streets, interrupt pedestrian routes, or negatively impact surrounding neighborhoods.

Image above highlights how parking can be screened and a driveway can blend into building facades

- Joint parking allowances are recommended for nearby uses with staggered peak periods of demand. Encourage the use of shared parking lots and shared driveways, especially for the properties within the Restaurant Row District.
- Connect adjacent parking areas through the use of reciprocal access agreements. Retail, office and entertainment uses should share parking areas and quantities.
- Encourage the use of in-lieu parking fees to contribute to centralized public parking lot(s). This will promote a "park once and walk" strategy to encourage visitors to walk to multiple businesses within the project area per visit.
- Encourage the use of parking lots in off-peak hours for sporting activities or farmers markets.
- All commercial parking lots adjoining a residential use should be screened by perimeter landscape treatments.
- Construct parking structures with open walls, windows, and other design features to allow natural light, and provide lighting so that structures are well lit during evening and nighttime hours.
- Residential garages should be configured to reduce the visual impact of the auto and be set back behind the front façade of the residential building.
- Restrict the number of new curb cuts along Morena Boulevard. New curb cuts must be a minimum of 75 feet away from any intersections and a minimum of 40 feet from any existing curb cut. If these conditions cannot be met, a shared access agreement must be established.

Being a good neighbor includes providing screening to parking areas. Parking is not attractive and should be shielded visually.

- Parking lots should be located to the rear or side of the property or internal to the block. Provide access to parking through alleys and driveways, as possible.

- Private surface parking lots are not permitted in front of buildings in the Residential Mixed-Use zone. Structured parking is encouraged.
- Bicycle parking facilities within automobile parking lots shall be provided at a rate of 1 bicycle parking facility per 5 cars.
- A portion of any project's parking requirements may be satisfied by on-street parking.
- Retail uses are encouraged on the first floor of street-side edges of parking structures. "Liner" (linear?) retail is strongly recommended.
- All parking lots must have sufficient trees so that within 10 years 70 percent of the surface area of the lot is shaded.
- All parking lots should be screened from streets by non-bermed perimeter landscape treatments.

Screening

- Fences and walls should be used to prevent or discourage the public access to dark and unmonitored areas and/or dead-end areas.
- All utilities should be located outside the public right-of-way within a building alcove, utility room, or landscaped area and be fully screened from view of the public right-of-way.
- All mechanical equipment, appurtenances, and access areas should be intentionally grouped and screened architecturally within fully covered enclosures consistent with the overall composition of the building.

Image above highlights how landscape and fences can be used to screen parking areas

5.13.5 Access to Public Open Space

- Fencing adjacent to paths/creeks should be visible and "open" to provide eyes on paths/creeks.
- Plazas adjacent to sidewalks, pedestrian paths, retail, and outdoor dining areas should be located to maximize visibility. With the exception of entrances, the elevation of a public space shall not be greater than 18 inches above the average curb level elevation of the nearest adjoining street.
- Buildings should engage adjacent parks through active ground floor uses, such as restaurants and cafes, and with glazed storefronts to create visual interest. They should include spill-out space for dining or sitting on the sidewalks facing parks.
- Building entrances should face parks to encourage buildings occupants to use the park.
- Buildings should step down in height to maximize solar access to the park.
- Where buildings face parks, blank walls with few windows and lack of ground-level program are strongly discouraged.

Image above highlights the use of a plaza to add visual interest and activity on a street

5.13.6 On-Going Maintenance Requirements and Shared Space Agreements

- As part of the project approval documents, inform property owners of the ongoing responsibility to keep parking areas, buildings, lighting, and landscaping properly maintained.
- Property owners must provide a maintenance agreement for lighting, landscaping, and street furnishings.
- Property owners must provide a shared access agreement if applicable to shared driveway or parking access.

Being a good neighbor includes communication and sharing curb cuts, parking, and access whenever possible.

6 Multi-Modal Concepts and Assessment

Based on priorities established in the City of San Diego General Plan and the mobility elements of this plan, a shift in focus has occurred in regards to planning for circulation improvements. The State of California has contributed to this shift in direction by providing legislation that mandates a change in approach when dealing with transportation. But more important than mandates are the demographic, economic and behavior changes which are becoming more apparent both globally and locally. Fewer people want to spend their time and money on commuting long distances. Many today are tending to self-select the locations where they live and work. They are eliminating long distance commutes and avoiding multiple daily trips because of a concern over environmental impacts associated with green house gas emissions. They are also changing their commute patterns for economic reasons, as well the time savings that result from shorter commutes or changing the commute mode where they can do other activities because someone else is driving (transit, carpool, vanpool). Finally, the trend towards active transportation is partly based on support for healthy lifestyles, providing another reason why our streets can no longer be looked at as a place just to drive a vehicle. All of these factors combine to indicate to transportation planners and traffic engineers that a different and more comprehensive approach to mobility is needed.

6.1 Mobility Background

The following sections are provided as background to the proposed conditions of the circulation system. Other sections of the full study provide more detailed background on the existing conditions and context and should be referenced. This chapter focuses on the decision process, alternative development plans, summary of community input on these alternatives, and recommendations for circulation improvements in the study area. This chapter also includes an assessment of expected changes and traffic flow analysis related to the alternative workshop plans as well as the recommended plans.

6.1.1 Existing Conditions

Please refer to others sections of the document for an overview of the existing conditions affecting the study area. A short overview of the existing conditions is included here to set the context for alternative circulation options and recommended street improvements.

The area is characterized by local traffic that maintains a moderate level of speed, with a certain amount of higher speed traffic resulting from drivers who cut through the area when I-5 is heavily congested. The southern end of the study area is a somewhat confusing arrangement of freeway-era style off-ramps, high-speed free right movements and non-standard intersections. This is especially true where the triangle area exists (formed by Linda Vista Road, Napa Street and Morena Boulevard) and again where Morena Boulevard splits into Morena and West Morena. These configurations make it very difficult for safe and comfortable travel as a pedestrian or as a person riding a bike.

The walkway environment is substandard for pedestrians due to a lack of pedestrian crossing facilities, the lack of ADA compatible facilities and the extensive use of off-street parking that is served from extra wide driveways. In many cases, walkways do not exist or are little more than aprons for parking. Significant distances occur between safe and legal crossing points. Although all intersections are legal crossings unless specifically marked for no pedestrian use, many are unsafe to cross in their current conditions. However, the

majority of intersections in the south portion of the study area have no signalization, pedestrian control signals, ramps or marked cross walks. Substantial distances have to be traveled in order to reach a safe and legal crossing point. From both a qualitative and quantitative perspective, the current level of service for pedestrians is very low. The current land use pattern in the area would indicate a higher priority should be required to fix these pedestrian related shortfalls. This will be especially true for future land uses that will include higher density, mixed-use, and transit oriented projects with a greater level of pedestrian activity being generated by these uses.

For the same reasons that make it difficult to walk, cycling is also difficult through the area. The high-speed, free-moving angled movements, high-speed merge lanes and the lack of bike facilities in general make cycling difficult at the south end. The north end of the study area is far better, but standard bike lanes are missing and cyclists have to ride too close to parked cars, which can result in vehicular door collisions. The level of service for cyclists would be considered moderate to low based on current roadway conditions and vehicular speeds and movements. The cycling level of service could be greatly improved through the reconfiguration of certain intersections and the addition of buffered bike lanes or separated facilities.

6.1.2 Mobility Based Legislation

Complete Streets and Routine Accommodation

For many cities, a bicycle master plan alone is not enough to ensure the implementation of the plan's goals and projects. A hurdle that many cities face is that their various plans are not well integrated. Despite many cities' attempts to support a "Complete Streets" approach, entrenched and often contradictory policies can make implementation difficult. For instance, a bicycle master plan, an ADA transition plan and a specific plan may address the same area, but ignore each other's recommendations. One plan may identify a certain project, but it may not be implementable due to prevailing policies and practices that prioritize vehicular flow and parking over other modes of travel.

Efforts to implement Complete Streets policies often highlight other significant obstacles, chief among them include "significant impacts" to traffic, acceptable thresholds to "vehicular level of service" and parking impacts. Drafting a Complete Streets policy often entails the identification of roadblocks such as these and ultimately requires increased flexibility to allow for the creation of a more balanced transportation system.

Legislative support for Complete Streets can be found at the state level (AB 1358) and is currently being developed at the national level (HR 2468). As explained in further detail in the following "relevant legislation" section, AB 1358 requires cities and counties to incorporate Complete Streets in their general plan updates and directs the state Office of Planning Research (OPR) to include Complete Streets principles in its update of guidelines for general plan circulation elements.

Examples of best practices in Complete Streets Policies from around the United States can be found at: *http://www.smartgrowthamerica.org/complete-streets-2013-analysis*.

Applicable Legislation

Several pieces of legislation support increased cycling in California. Much of the legislation concerns greenhouse gas (GHG) reduction and employs cycling as a means to achieve GHG targets. Other legislation highlights the intrinsic worth of cycling and treats the safe and convenient accommodation of cyclists as a matter of equity. The most relevant legislative acts for bicycle policy, planning, infrastructure and programs are described below.

State Legislation and Policies

AB 32 Global Warming Solutions Act

AB 32 calls for the reduction of greenhouse gas emissions and codifies the 2020 emissions reduction goal. This act also directs the California Air Resources Board to develop specific early actions to reduce greenhouse gases while also preparing a scoping plan to identify how best to reach the 2020 goal. The Morena Boulevard Station Area Planning Study includes several initiatives to help meet these requirements, including smart growth development, transit supportive development, mixed-use development, bike facilities, walking facilities, efficient use of land resources, options for car sharing and bike sharing, and urban forestry elements.

SB 375 Redesigning Communities to Reduce Greenhouse Gases

This bill seeks to reduce vehicle miles traveled through land use and planning incentives. Key provisions require the larger regional transportation planning agencies to develop more sophisticated transportation planning models, and to use them for the purpose of creating "preferred growth scenarios" in their regional plans that limit greenhouse gas emissions. The bill also provides incentives for local governments to incorporate these growth scenarios into the transportation elements of their general land use plans.

AB 1358 The Complete Streets Act

AB 1358 requires a city or county, upon revision of the circulation element of their general plan, to identify how the jurisdiction will provide for the routine accommodation of all users of the roadway including motorists, pedestrians, bicyclists, individuals with disabilities, seniors, and users of public transportation. The bill also directs the State Office of Planning and Research to amend guidelines for the creation of general plan circulation elements so that the building and operation of local transportation facilities safely and conveniently accommodate everyone, regardless of their mode of travel.

AB 1581 Bicycle and Motorcycle Traffic Signal Actuation

This bill defines a traffic control device as a traffic-actuated signal that displays one or more of its indications in response to the presence of traffic detected by mechanical, visual, electrical, or other means. Upon the first placement or replacement of a traffic-actuated signal, the signal would have to be installed and maintained, to the extent feasible and in conformance with professional engineering practices, to detect lawful bicycle or motorcycle traffic on the roadway. Caltrans has adopted standards for implementing this legislation.

AB-1371 Vehicles: Bicycles: Passing Distance/Three Feet for Safety Act

This statute, widely referred to as the “3 Foot Passing Law,” requires drivers to provide at least three feet of clearance when overtaking cyclists. If traffic or roadway conditions

prevent drivers from giving cyclists three feet of clearance, they must "*slow to a speed that is reasonable and prudent*" and wait until they reach a point where passing can occur without endangering the cyclist. Violations are punishable by a $35 base fine, but drivers who collide with cyclists and injure them in violation of the law will be subject to a $220 fine. The law is slated to take effect September 14, 2014.

SB743 CEQA Reform Bill

Just as important as the aforementioned pieces of legislation that support increases in cycling infrastructure and routine accommodation is one bill that promises to remove a longstanding roadblock to cycling infrastructure and accommodation. That roadblock is Level of Service (LOS) and the legislation with the potential to remove it is SB743.

For decades, vehicular congestion has been interpreted as an environmental impact and has often stymied bicycle and pedestrian projects. Projections of degraded Level of Service have, at a minimum, driven up project costs and, at a maximum, precluded projects altogether and excluded many uses when the assets of a roadway are completely given over to vehicular traffic only. SB743 could completely remove LOS as a measure of vehicular traffic congestion that must be used to analyze environmental impacts under the California Environmental Quality Act (CEQA).

This is a very important piece of legislation because adequately accommodating cyclists, particularly in built-out environments, often requires reallocation of right-of-way and the potential for increased vehicular congestion. The reframing of Level of Service as a matter of motorist inconvenience, rather than an environmental impact, will allow planners to assess the true impacts of transportation projects and will help support cycling and pedestrian projects that improve mobility for all roadway users.

Caltrans' Deputy Directive 64-R1

Deputy Directive 64-R1 is a policy statement affecting Caltrans mobility planning and projects requiring the agency to "*provide for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities and products on the State highway system. The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system*." Deputy Directive 64-R1 goes on to mention the environmental, health and economic benefits of more Complete Streets.

Federal Legislation

Safe Streets Act (S2004/HR2468)

HR2468 encourages safer streets through policy adoption at the state and regional levels, mirroring an approach already being used in more than 530 local jurisdictions, 51 regional agencies, 27 states, the Commonwealth of Puerto Rico and the District of Columbia. The bill calls upon all states and metropolitan planning organizations (MPOs) to adopt Safe Streets policies for federally funded projects within two years. Such policies would apply to new construction and roadway improvement projects. Federal legislation will ensure consistency and flexibility in the processes and standards that direct road-building at all levels of governance. It will help ensure effective practice and proven safety measures become federal guidelines, leading to improved safety on community streets.

6.2 Process for Developing Alternatives

All concepts developed by this project need to take into account the goal of supporting all travel modes, not only because California Complete Streets legislation requires it, but to address safety and connectivity goals for the local community, as well as the first and last mile pedestrian and bike connections to the existing and proposed trolley stations. The intent of Complete Streets legislation is to take all roadway users into account when planning for changes along a roadway. Although the legislation does not require that all uses be equally balanced or that they have a place within the geometric cross section of the right-of-way, they do need to be accommodated in a safe and direct manner, within the study area itself. All mobility alternatives considered take into account the Complete Streets requirements and they look at providing additional linkages to the existing and proposed transit stations in the area.

Land use scenarios also are an important foundation to transportation planning. The land uses proposed by the MBAP not only have an impact on the urban form of the study area, but also the efficiency and loading demand on the circulation system. Any change in land uses, or change in intensity of land use, can have an impact, positive or negative, on mobility within the study area.

The primary approach for developing mobility alternatives was to first decide on varying levels of land use that look at different land use mixes, densities and vehicular trip generation. Then, the mobility alternatives were paired up with the appropriate land use alternatives as required to support varying levels of trip generation and traffic volumes.

6.2.1 Overall Project Mobility Vision

The mobility-based vision is one that promotes a balanced approach on roadway use, recognizing the role that streets play not only for vehicular flow and goods movement, but also for improvements to transit access, general pedestrian movements and bike uses. The vision also recognizes the role that streets provide in accommodating and promoting the adjacent land use, activating public spaces with eyes on the public realm and providing additional parking options that also buffer pedestrian and other street uses. The vision strives to identify available capacity in roadway geometry that is not needed for vehicular throughput and reassign this space for bike lanes, pedestrian improvements, on-street parking or streetscape resources that can help provide shade, pedestrian protection, reduce urban heat island affects or provide for stormwater runoff options. Another key component of the vision is to provide better connections between the proposed and existing trolley stations to destinations in the community and connections to the recreational resources of Tecolote Canyon, Tecolote Creek, Fiesta Island and the east shores of Mission Bay. The current walking and biking environment connecting these uses are either non-existent or are very uncomfortable and contain safety issues.

6.2.2 Community Plan (Baseline 2035 Condition)

For the purposes of reviewing and assessing the roadway capacity to accommodate future conditions, a baseline condition is needed for comparisons. The Community Plan 2035 Baseline condition is represented by the circulation improvements made in the Clairemont Mesa Community Plan and the Linda Vista Community Plan. Both of these

plans share similar goals of improving the existing street system, including bicycle and pedestrian components, to accommodate projected growth.

The following street elements are found in the adopted community plans:

- Two-travel lanes northbound and southbound on Morena Boulevard
- Parallel parking on both sides of Morena Boulevard
- Unobstructed sidewalks with planted parkways throughout the study area
- Planted medians
- Class 2 Bike lanes throughout the study area
- A new standard intersection where Knoxville Street meets West Morena Boulevard
- Two-travel lanes on Napa Street
- Two-travel lanes on Linda Vista Road

6.3 Workshop Alternative Concept Plans

The following descriptions and accompanying maps are representative of materials shown to the community through a series of meetings, presentations and workshops. This section should not to be confused with the recommended plans discussed later in the chapter. They are included here to represent the broad range of options that were reviewed and to document why certain options did not move forward into the recommendations phase of this study.

6.3.1 Common Circulation Elements Found in All 3 Alternative Concepts

The following design elements are common among the three conceptual plans developed for the workshops. They are each applied to their unique street conditions and are designed to improve the pedestrian, cyclist, and vehicular street environment. Common elements include:

- Use of lane diets (lane widths) to increase width for other uses and to calm traffic
- Use of road diets (dropping a lane) to increase width for other uses
- Provision of bicycle facilities
- Curb extensions that improve the visibility of walkers, and shortens the crossing distance
- Elements that encourage traffic calming
- New opportunities for landscaping
- Streetscape with tree-planted medians and parkways
- Increased visual quality
- Options for storm water management

6.3.2 Alternative 1: Lane Reductions with "T" Intersections (Conservative Circulation Alternative)

The primary design concept for this alternative is how the safety and comfort of pedestrians, cyclists, and drivers can be improved by reconfiguring several existing intersections into standard intersections. Please refer to the overview map on Figure 1, cross sections shown on Figure 2 and 3, and detail sheets shown on Figures 4 through 7. This approach is considered to be conservative since it preserves future capacity for additional traffic while taking back a portion of the excess rights-of-way that are not needed based on volume (present, planned and proposed).

The following design elements are unique to the northern portion of the study area north of the new LRT Tecolote Station (Figures 4 and 5):

- Morena Boulevard is proposed to have one traffic lane southbound and two traffic lanes northbound.
- Parallel parking is provided on the eastern side of Morena Boulevard between Jellet Street and Knoxville Street.
- Buffered Class 2 bike lanes are included on both sides of Morena Boulevard between Jellet Street and Knoxville Street.
- A new standard intersection where Knoxville Street meets West Morena Boulevard is proposed
- A proposed trail along Tecolote Creek on the northern side of Tecolote Road between Morena Boulevard and West Morena Boulevard provides pedestrian access.
- A new walkway on the southern side of Tecolote Road between Savannah Street and West Morena Boulevard that will provide pedestrian access.

Southern portion from the new Tecolote LRT Station to the southern boundary of study area (Figures 6 and 7):

- West Morena Boulevard is designed to have two traffic lanes both northbound and southbound.
- Parallel parking is provided on both sides of Morena Boulevard between Vega Street and the southern Morena split.
- Buffered Class 2 bike lanes are found on both sides of Morena Boulevard between Vega Street and the southern Morena split.
- Class 2 bike lanes continue on both sides of Morena Boulevard past the southern Morena split towards the southern boundary of the study area.
- New parking and green space proposed on the eastern side of Morena Boulevard between the southern Morena split and the intersection where Napa Street, Sherman Street and Morena Boulevard meet.

Design treatments to the eastern extension of Morena Boulevard north of the current Morena split (Figure 7):

- Class 2 bike lanes on both sides and a pedestrian mid-block crossing north of Dorcas Street.
- The southern Morena split and the intersection where Napa Street, Sherman Street and Morena Boulevard meet are redesigned as standard intersections. Although the existing freeway-style street configuration is efficient for motorists, it negatively affects the pedestrian and cycling experience and introduces safety concerns. By redesigning these as standard intersections, vehicular speeds are reduced, which in turn improves the safety and comfort of all roadway users.

6.3.3 Alternative 2: Lane Reductions with "Triangle –about" (Moderate Circulation Alternative)

The design concept for this alternate focuses on the reconfiguration of circulation patterns around the triangular parcel of land bordered by Napa Street, Morena Boulevard, and Linda Vista Road. Please refer to the overview map on Figure 8, cross sections shown on Figure 9 and 10, and detail sheets shown on Figure 11 through 14. The "Triangle-About" is inspired by the free-flowing, continuous circulation and organization found in standard round-abouts.

The following design elements are unique to the northern portion of the study area north of the new LRT Tecolote Station (Figures 11 and 12):

- Morena Boulevard is designed to have one traffic lane southbound and one traffic lane northbound.
- Parallel parking is provided on the eastern side of Morena Boulevard between Jellet Street and Knoxville Street.
- A buffered Class 2 bike lane is included on the eastern side of Morena Boulevard between Jellet Street and Knoxville Street.
- A buffered multi-use trail is proposed on the west side of Morena Boulevard.
- A new standard intersection where Knoxville Street meets West Morena Boulevard is proposed
- A trail is proposed along Tecolote Creek on the northern side of Tecolote Road between Morena Boulevard and West Morena Boulevard to provide pedestrian access.
- A new walkway on the southern side of Tecolote Road between Savannah Street and West Morena Boulevard provides pedestrian access.

Southern portion from the new Tecolote LRT Station down to the current Morena Split (Figures 13 and 14):

- West Morena Boulevard is designed to have one traffic lane southbound and one traffic lane northbound between Tecolote Road and the southern Morena split.
- Morena Boulevard is designed to have one traffic lane southbound and one traffic lane northbound between Tecolote Road and the southern Morena split.
- Morena Boulevard is designed to have two traffic lanes southbound between the southern Morena split and the southern boundary of the study area.
- Angled parking is provided on both sides of West Morena Boulevard between Vega Street and the southern Morena split.
- Tree pop-outs are included at every 4-5 angled parking spaces.
- A multi-use trail is proposed on the west side of Morena Boulevard.
- The southern Morena split is redesigned as a traditional intersection.
- A Cass II bike lane is proposed on the west side of Linda Vista Road and on both sides of Linda Vista Road north of Napa Street.
- New parking and green space is proposed on the eastern side of Morena Boulevard between the southern Morena Split and the Triangle-about for the existing businesses.
- Improvements on Morena Boulevard between Tecolote Road and the southern Morena split include Class 2 bike lanes on both sides and a pedestrian mid-block crossing north of Dorcas Street.

Summary of the circulation being proposed by the Triangle-About (Figure 14):
The Triangle-About aims to improve circulation, safety, and comfort by reconfiguring the roadway and public right-of-way around the triangular parcel of land bordered by Napa Street, Morena Boulevard, and Linda Vista Road. Free-left turns and pedestrian-actuated crosswalks work together to create an efficient and safe mode of navigation. Some of the features include:

- Morena Boulevard south of Napa Street becomes one-way heading southbound.
- Provides more efficiently flowing traffic for motorists traveling southbound on Morena Boulevard and for those who need to connect to Linda Vista Road.
- Motorists traveling northbound on Morena Boulevard south of Linda Vista Road are directed onto Linda Vista Road and must navigate around the triangle-about to continue northbound on Morena Boulevard.
- Motorists traveling southbound on Linda Vista Road towards Morena Boulevard must turn right onto the triangle-about on Napa Street and can then continue northbound or southbound.
- The multi-use trail on the west side of Morena Boulevard comes to an end at the southern corner of the triangle-about. Pedestrians and cyclists who need to head northbound on Linda Vista Road can use the pedestrian/bicycle-actuated crosswalk to safely cross.
- Pedestrian-actuated crosswalks are located at each corner of the triangle-about.
- Entrances to the business inside of the triangle-about are maintained on each side.

6.3.4 Alternative 3: Lane Reductions w Roundabouts (Aggressive Circulation Alternative)

The design concept for this alternate focuses on the reconfiguration of the circulation of the southern Morena split and the triangular parcel of land bordered by Napa Street, Morena Boulevard, and Linda Vista Road. Please refer to the overview map on Figure 15, cross sections shown on Figures 16 and 17, and detail sheets shown on Figures 18 through 21. The efficient, free-flowing design of round-abouts will improve the circulation at these two locations, as well as provide new opportunities for green space and gateway/art installations.

The following design elements are unique to the northern portion of the study area north of the new LRT Tecolote Station (Figures 18 and 19):

- Morena Boulevard is designed to have two traffic lanes both southbound and northbound.
- Parallel parking is provided on the eastern side of Morena Boulevard between Jellet Street and Knoxville Street.
- Class 2 bike lanes are proposed on both sides of Morena Boulevard between Jellet Street and the Tecolote Station.

Southern portion from the new Tecolote LRT Station to the southern boundary of the study area (Figures 20 and 21):

- West Morena Boulevard is designed to have one traffic lane southbound and one traffic lane northbound between Tecolote Road and the southern Morena split.
- Morena Boulevard is designed to have one traffic lane southbound and one traffic lane northbound between Tecolote Road and the southern Morena split.
- Morena Boulevard is designed to have two traffic lanes southbound between the southern Morena split and the southern boundary of the study area.
- One of these lanes functions as a bypass lane through the round-abouts.
- Angled parking is provided on both sides of West Morena Boulevard between Vega Street and the southern Morena split.
- Tree pop-outs are included at every 4-5 angled parking spaces.
- A multi-use trail is proposed on the west side of Morena Boulevard
- A pedestrian-actuated crosswalk is proposed at the Morena Boulevard-Dorcas Street-Naples Street intersection.
- Additional parking and green space is proposed on the eastern side of Morena Boulevard between the two round-abouts for the existing businesses.

Summary of the circulation being proposed by the Round-About (Figure 21):

- Motorists travelling southbound on West Morena Boulevard and Morena Boulevard can take the bypass lane to continue southbound freely.
- Motorists needing to turn back or head towards Linda Vista Road can navigate through the round-about freely.
- This vehicular circulation also applies to motorists traveling northbound on Morena Boulevard and Naples Street.
- The multi-use trail on the west side of Morena Boulevard comes to an end at the Morena Boulevard-Linda Vista Road intersection. Pedestrians and cyclists who need to head northbound on Linda Vista Road use the pedestrian/bicycle actuated crosswalk to safely continue across.
- Pedestrian-actuated crosswalks are located around the round-abouts.

6.3.5 I-5 Bridge Crossing Options

The MBAP also addresses the existing issues that make the Tecolote and Clairemont I-5 freeway overpasses a challenge for pedestrians and cyclists to navigate. Three solutions are proposed for each bridge and include specific combinations of the following design elements:

6.3.6 Tecolote I-5 Crossings (Figure 22 Overview Map)

Option 1 (Figure 23)

- A five-foot Class 2 bike lane with a one and a half-foot striped buffer on the outside
- The existing walkway remains the same, but pedestrians benefit from greater separation from vehicular traffic as a result of the bike lane
- Two travel lanes westbound and eastbound

Option 2 (Figure 24)

- A five-foot Class 2 bike lane with a three-foot striped buffer on the outside
- The existing walkway remains the same, but pedestrians benefit from the new separation from vehicular traffic
- One travel lane westbound and two travel lanes eastbound

Option 3 (Figure 25)

- A five-foot Class 2 bike lane with a two-foot striped buffer on the outside
- Walkways are widened to eight feet
- One travel lane westbound and two travel lanes eastbound

6.3.7 Clairemont I-5 Crossings (Figure 26 Overview Map)

Option 1 (Figure 27)

- A five-foot Class 2 bike lane with a three-foot striped buffer on the outside
- The existing walkway remains the same, but pedestrians benefit from the new separation from vehicular traffic
- Two travel lanes northbound and southbound

Option 2 (Figure 28)

- A five-foot Class 2 bike lane with a three-foot striped buffer on both sides
- The bike lane heading westbound is placed to the left of right turn-only lanes
- Walkways are widened to eight feet
- Two travel lanes northbound and southbound

Option 3 (Figure 29)

- A painted and buffered multiuse path (Class 1) designed in the center median
- Walkways are widened to eight feet
- Two-travel lanes northbound and southbound

6.3.8 Community Input on the Alternative Concepts

Community Workshop 3 was held on November 12, 2013 at the San Diego Humane Society. The workshop summarized the findings and recommendations of the previous two workshops, and provided new information. The three land use and mobility concepts were formally presented, followed by table-top discussions.

In general, workshop attendees supported the goal of shifting some non-residential land uses to residential land uses, as long as a core of businesses were retained and enhanced to support the budding "design district" identity of the corridor. Attendees recognized the importance of increasing the level of development near the existing and proposed trolley stations as a means to direct growth away from established single-family neighborhoods and support long-term sustainability goals. There were varying opinions on the appropriate level of density near the stations, however. Some workshop attendees agreed that 60' in height was appropriate in certain locations, especially if it is "stepped back" as it approaches lower density development. Other attendees were adamant that the existing 30' height limit (in the Clairemont planning area) be enforced. Of particular concern to this group were blockage of views and the introduction of too much development in an already established neighborhood.

The following are key points and comments received from community members regarding the Land Use Alternatives:

- Several people requested to make sure building heights are restricted to a maximum of 30 feet to prevent view blockages.
- People overall agreed that higher density seems appropriate for this corridor, especially near Linda Vista Road due to the close proximity to USD.
- The idea of implementing a parking district along Morena Boulevard was supported.

The following are key points and comments received from community members regarding the Mobility Alternatives:

Alternative 1 (Figure 1)

- There is large community support for opening up Knoxville Street to Morena Boulevard.
- Support for making Morena-Napa Street-Sherman intersection into a standard intersection.
- People were concerned about the safety of cyclists on both bridges at each right turn lane.
- There was also concern about traffic backing up on the bridges due to the lane reductions.

Alternative 2 (Figure 8)

- People were concerned whether Ingulf Street would be able to handle the new traffic that would result from the station.
- Large support for the multi-use trail on the west side of Morena Boulevard.
- Large community support for opening up Knoxville Street to Morena Boulevard.
- There was some concern whether the "triangle-about" would be able to handle high traffic volumes and how easy would it be to navigate.
- Several people suggested using new green spaces for monumentation/gateways.

Alternative 3 (Figure 15)

- Large community support for opening up Knoxville Street to Morena Boulevard.
- The multi-use trail in the center median on Clairemont Drive had mixed reviews.
- The round-abouts also had mixed reviews. Some people thought it was a great idea, others thought it would be too confusing
- Large support for the Class 2 bike facilities

6.3.9 Documentation of Decisions based on Community Input, Staff Input and Initial Feasibility Analysis

Land Use Scenarios

Discussions on the recommended land use scenarios are discussed in other portions of this document. In general, however, it was felt that a moderately aggressive land use scenario would be the best to consider for refinement. The initial modeling done for traffic generation was based upon the moderately aggressive land use scenario in terms of location of land use changes and intensification. The initial intensity of new development looked at in this model matched that of the aggressive land use scenario. However, after initial model runs and further review by city staff, the intensity was dropped back to levels closer to the moderately aggressive scenario. Review the other sections of the document, including Section 1.3.1, to obtain a better sense of the final recommended land use plan.

Additional Variations of the Workshop Alternatives

In an effort to work through some potential benefits to on-street parking and to reconfigurations around the transit stations, some additional concept refinement was conducted prior to the recommended plans (Figure 34). These efforts focused on providing on-street parking for the transit stations and angled parking in the business districts. There was also a variation in the roadway geometry directly next to the Clairemont station platforms, as well as variations at the Tecolote station.

The refined alternatives located at the Clairemont station looked at dropping a lane of travel southbound, and providing a greater width at the station platform, which is currently proposed to have a protection wall since the platform extends to the curb edge which has a travel lane currently in this location (see Figures 30 through 33). The dropping of the travel lane allows for a walkway, fence and tree buffer to be placed in this area making the station platform and adjacent pedestrian circulation work better. The other variations considered did not work as well as Figure 33.

Mobility Alternative Options Analyzed at the North End of the Study Area

The alternative that was refined into the recommended plan discussed below was that of the Conservative Alternative (See Section 1 on Figure 3). This version captures some capacity of the excess roadway and makes it available for other uses. Southbound travel lanes are reduced to one travel lane while northbound travel remains at two. The final recommended alternative is also based on a variation of Figure 35, except that it also includes a full width multi use path. The circulation alternative for North Morena Boulevard shown in the moderate alternative was determined to not be feasible due to a requirement that emergency vehicles need a minimum passing requirement of 20' between raised medians and parked vehicles or curbs (See Section 1 on Figure 10 and Figure 36). The aggressive alternative (actually conservative approach for mobility in order to support an aggressive land use alternative) was determined to not obtain enough benefits for other uses and did not address some of the community requested features (See Section 1 on Figure 17). This alternative is close to the current condition, with the addition of bike lanes created out of lane width reductions (Figure 37).

Mobility Alternative Options Analyzed at the South End of the Study Area

South of the Clairemont station, a potential exists for providing on-street parking to service the station (see Figures 34). The same applies to the Tecolote station (see Figure 38). MTS as the transit authority does have pre-emptive rights to the public right-of-way for transportation purposes. If they wanted to use some of the excess public right-of-way for parking, they do have the jurisdictional authority to do so. However, after careful site planning and roadway geometry layout, it was determined that the variation in lane markings, cross intersection lane line ups and the limited amount of parking generated was not worth the expense or right-of-way to recommend inclusion in the final plans. Also, SANDAG / MTS indicated that the on-street parking would not entice them to lower their off-street parking requirements. One of the goals of this alternative is to accommodate some of the transit station parking on the street, and to allow less of the nearby development capacity for transit oriented development to be taken up by Mid-Coast surface parking lots. Without the commitment to reserve these off-site areas for future development (or at least some of these areas), the goal was not attained and therefore this alternative was dropped form further consideration. It has been included here in case the benefits (parking capacity, traffic calming through a chicane arrangement of lanes, protection for the adjacent Class 1 multi-use path) were considered to be important enough to continue to pursue or if SANDAG / MTS decided to lower their off-street parking needs. The actual recommended plan took a variation of this concept by adding drop-off zones, kiss and rides, 15 minute waiting zones and taxi-zones along the east and west sides nearest the Clairemont and Tecolote stations.

A third area of concept refinement occurred south of the Tecolote station, south of Vega Street (see Figure 38 through 40). The original intent of some of the concepts was to allow for angled parking along the east side of West Morena near the design district (Figure 38 and 39). This would substantially increase the amount of available parking that would in turn allow reinvestment in the existing development without having to be brought up to current parking code requirements. The businesses would pay into a parking management district fund run by local stakeholders. If they cannot meet parking standards on their small lots and or make a structured parking solution work due to small lot dimensions, they would pay an in-lieu parking fee equivalent to the cost of a structured parking space for each parking space they would normally be required to provide. This approach also allows for parking strategies where some customers and employees would be able to park once and walk to several destinations. These spaces could also be metered and money collected would be partially available to the parking district to reinvest in circulation improvements in the Morena Design District area. However, the City of San Diego expressed concern over the ability to fit a bike lane and angle parking through this area. Solutions included the use of sharrows in the outer lane of the two lane road heading northbound on West Morena. Another solution included a “green back” painted sharrow lane (Figure 39), similar to what was done in a business district in Long Beach. However, the city’s stance on these solutions is that they did not want to pursue a sharrow or sharrow lane solution, so this alternative was dropped and parallel parking is now proposed as part of the recommended plan (Figure 40).

None of the three alternative street configurations represented in the workshops were carried through without major change into the recommended phase. Traffic modeling and detailed analysis determined that none of the three would work efficiently and provide enough benefits compared to the costs. The conservative scenario was too conservative

and continued to have level of service failures at the triangle (Figure 7). The right angle "T" did work well at the current Morena south end split. The Knoxville connection at West Morena worked adequately and was moved forward into the recommended plan.

The "triangle-about" (Figure 14) and the "round-about" (Figure 21) versions of roadway adjustments did not completely resolve the congestion problems associated with traffic flow in the area. The recommended plan uses the idea of the "triangle-about" as the mid-term solution (although it is two way), but replaces several streets in the south study area with a distributed grid network that allows for the bypassing of through traffic that is freeway bound at Tecolote Road and I-5, to take a more direct path to this location instead of going through the congested Napa / Linda Vista / Morena triangle congestion point (see Figures 54 and 58).

6.4 Recommended Plans

This section differs from all of the previous discussions in that it relates only to recommendations of land use and circulation changes and not a variety of alternative suggestions and testing of concepts.

6.4.1 Preferred Land Use Plan as the Foundation to the Mobility Plan

Based on input provided by the community and city staff, land use alternatives were merged to produce a scenario that decreases non-residential uses while providing a significant increase in multi-family residential/mixed-uses.

The land use quantities as proposed in the preferred land use alternative are:

- Residential: approximately 5,800 dwelling units (Increase of approximately 4,800 from existing)
- Non-residential commercial, retail, office, and industrial uses: 2.7 million square feet (Decrease of approximately 700,000 square feet from existing)

6.4.2 Common Mobility Element Improvements

The following design elements are found throughout the study area in both the Mid-term and Long-term Recommended Plans. They are each applied to their unique street conditions and are designed to improve the pedestrian, cyclist and vehicular street environment. These common elements include:

- Lane diets/road diets (reducing the number of travel lanes and narrowing widths can reduce vehicular speeds)
- Curb extensions (improves visibility of pedestrians and shortens crossing distance)
- Improved traffic calming through the introduction of edge friction, including parking, street trees and lane markings
- Reclaimed street geometry allowing for bike facilities and parkway planters
- Streetscapes enhanced with the addition of medians and parkways planted with trees and native/drought-tolerant vegetation that can be used for stormwater management

6.4.3 Long-term Recommended Mobility Plan

The Long-term Recommended Alternative focuses on new street connections in the southern portion of the study area and the reorganization of roadway conditions around the triangular parcel of land bordered by Napa Street, Morena Boulevard, and Linda Vista Road. Please refer to Figure 41 for an overview of the plan, Sections 1 through 5 shown on Figures 42 through 54 and detail sheets on Figures 46 through 56.

The following design elements are unique to the northern portion of the study area north of the new LRT Tecolote station (Figures 46 to 51):

- Morena Boulevard is designed to have one lane southbound and two lanes northbound
- Parallel parking is provided on both sides of Morena Boulevard between the Clairemont station and Lister Street
- Parallel parking is provided on the eastern side of Morena Boulevard between
- Lister Street and Knoxville Street
- Buffered Class 2 bike lanes are included on both sides of Morena Boulevard
- A multi-use trail with a tree-planted parkway buffer is proposed on the west side of Morena Boulevard
- Tree pop-outs are proposed on the east side of Morena Boulevard

- A new standard "T" intersection is proposed where Knoxville Street meets West Morena Boulevard
- A trail is proposed along Tecolote Creek on the northern side of Tecolote Road between Morena Boulevard and West Morena Boulevard, providing pedestrian access.
- A new walkway on the southern side of Tecolote Road between Savannah Street and West Morena Boulevard provides pedestrian access.

Southern portion from the new Tecolote LRT station to the southern boundary of the study area (Figures 52 through 55):

- Morena Boulevard is designed to have one lane southbound and two lanes northbound between Vega Street and the southern Morena split
- Morena Boulevard is designed to have two lanes southbound and one lane northbound between the southern Morena split and Linda Vista Road
- Angled parking is located on the east side, as well as parallel parking on west side of Morena Boulevard between Vega Street and the southern Morena split
- Parallel parking is located on the east side of Morena Boulevard between the southern Morena split and Linda Vista Road
- Tree pop-outs are proposed on the east side of Morena Boulevard between Vega Street and the southern Morena split
- Buffered Class 2 bike lanes are included along the west side of Morena Boulevard and between the southern Morena split and Linda Vista Road on the east side
- A Class 2 bike lane is included on the east side between the southern Morena split and Vega Street

New Intersections and New Streets (Figure 54)

Several new intersections and street segments are proposed to efficiently handle future traffic flow, as well as provide pedestrians and cyclists safe and comfortable streetscape environments. These streets are laid out in a more geometric manner and follow a grid pattern, which is the best way to distribute traffic on a variety of streets and provide a more even flow of traffic. A grid street network also works better for pedestrian crossings and helps to increase the overall likelihood of someone walking to destinations.

New Intersections include:

- The southern Morena split is redesigned as a standard intersection
- Napa Street between Linda Vista Road and Morena Boulevard is completely closed off to vehicular traffic
- The intersection between Linda Vista Road and Morena Boulevard is redesigned as a standard "T" intersection.

New Street Segments include:

- A new collector road, referred as "East Morena", is proposed between Cushman Avenue and Linda Vista Road and includes:
    - One lane northbound and southbound
    - Class 2 bike facilities
    - Curb extensions
    - Parkways and tree-planted median
- Cushman Avenue is extended westward towards West Morena Boulevard. This new standard intersection replaces the southern Morena split and includes:
    - One lane northbound and southbound
    - Class 2 bike facilities
    - Tree-planted parkways

- Sherman Street is extended eastward towards the new East Morena Boulevard and includes:
    - One lane northbound and southbound
    - Class 3 bike route
    - Planted parkway

6.4.4 Interim Mid-term Recommended Mobility Plan

The Long-term Recommended Mobility Plan has already been described, although out of chronological order with the Mid-term. This was done to indicate the interim nature of how some of the Long-term plan can be implemented, while waiting for development that may take a while to come along and make the needed roadway changes that the Long-term plan is based on. The Mid-term Recommended Plan design concept focuses on the re-organization of the roadway conditions around the triangular parcel of land bordered by Napa Street, Morena Boulevard, and Linda Vista Road. Please refer to Figures 57 and 58.

The following design elements are unique to the northern portion of the study area north of the new LRT Tecolote station:

- Morena Boulevard is designed to have one lane southbound and two lanes northbound
- Parallel parking is provided on the eastern side of Morena Boulevard
- Class 2 bike lanes are provided on both sides of Morena Boulevard
- New standard "T" intersection where Knoxville Street meets West Morena Boulevard

Southern portion from the new Tecolote LRT station to the southern boundary of the study area:

- Morena Boulevard is designed to have one lane both northbound and southbound between Tecolote Road and the southern Morena split
- Morena Boulevard is designed to have two lanes southbound and one lane northbound between the southern Morena split and the southern boundary of the study area
- Left turns onto eastbound Napa Street are restricted for those traveling southbound on Morena Boulevard
- A dual left turn is proposed at the Morena Boulevard-Linda Vista Road intersection for motorists traveling southbound on Morena Boulevard onto Linda Vista Road
- Linda Vista Road is designed to have two lanes northbound and southbound
- Napa Street is designed to have two lanes westbound and one lane eastbound

6.4.5 Recommendations for a BayView Loop Trail

A potential exists for the communities of Clairemont and Linda Vista to have a looped multi-use path that is mostly separated from vehicular traffic. This loop combines a number of the proposed elements of this plan with the existing Mission Bay Trail system (Figure 59). The Bayview Loop Trail is intended to be a circular series of 10'-12' wide pathways that connect Mission Bay Park, Fiesta Island, Tecolote Creek, Tecolote Canyon, and the West Morena Boulevard Multi-use Path. This loop system is shown on Figure 59, which displays all proposed and existing bike facilities, along with the Bayview Loop Trail (BLT). The community has expressed a high level of concern and desire to be more connected with Mission Bay, a resource a stone's throw away, but completely distant based on safe and comfortable access. Although the community would like to see a bridge that spans over the rail lines and the freeway, this project believes that a more feasible and cost effective solution would be to retrofit the two bridges to be more pedestrian and bike friendly, and provide a few missing segments that can tie together

multiple trail segments in the community. The Coastal Rail Trail is proposed through this corridor. Based on several of the design options in this report, the Coastal Rail Trail could utilize Morena Boulevard as its north to south connector through the area. The combination of buffered Class 2 bike lanes and the stand-alone Class I multi-use paths would make for a very safe and low stress route through this area. Even if this segment were not designated the Coastal Rail Trail, it can certainly connect to the west of the freeway side of the Coastal Rail Trail as currently designated.

6.4.6 Recommendations for a Tecolote Creek Trail

Tecolote Creek is an under-appreciated creek system that has been mostly channelized. Adequate space exists on each side of the creek channel to allow for the development of a recreational and transportation pathway system. As shown on Figure 59, a Class I trail would connect with the West Morena Multi-use Trail, allowing a westward connection to the Tecolote Bridge route to Mission Bay or an eastward trail up to Tecolote Canyon Open Space Preserve and Nature Center.

6.4.7 Recommended Tecolote Bridge Crossing Plan

The median widths and overall geometry of Tecolote bridge will not allow for a center median running solution, nor will it allow for walkway expansions or a raised Class 2 bike lane. This is primarily due to a Caltrans restriction on bridge modification since its seismic condition is not known, resulting in a restriction on adding substantial weight to the bridge. In addition, the traffic volumes and turning motions will make any lane loss unacceptable. However, there are wide lanes on the bridge and the median is also much wider than it needs to be. The best solution for this tight bridge will be to provide full width bike lanes. These bike lanes benefit the pedestrian by providing an additional five to six feet offset of vehicles from the edge of the walkways. Please refer to Figures 60 and 61. Features included on the Tecolote Road freeway overpass include:

- Painted, buffered Class 2 bike lanes on both sides between Pacific Highway and Morena Boulevard
- Bike lane heading westbound is directed to the left of the right turn lane of the I-5 northbound on-ramp
- New signage alerts motorists wishing to merge into the right turn lane to yield to bicycles
- Two travel lanes eastbound and westbound
- On-ramps and off-ramps are “squared up” to create standard intersections and increase traffic calming
- A new path on the northwest side of Sea World Drive provides a faster connection for pedestrians and cyclists to Fiesta Island and Mission Bay Park

6.4.8 Recommended Clairemont Bridge Crossing Plan

The recommended solution for the Clairemont bridge crossing plan must address the existing issues that make it difficult for pedestrians and cyclists to mix with vehicles on the freeway overpass. The proposed solutions strive to improve the overpasses by providing facilities that buffer and protect pedestrians and cyclists while maintaining efficient vehicular traffic flow. Additional improvements are also included at the East Mission Bay Drive intersection with Clairemont Drive to provide better connections to the existing trail system around East Mission Bay (Figures 62-70). Some of the major features for the Clairemont bridge plan include:

- Buffered multi-use path designed in the center median between Denver Street and East Mission Bay Drive
- Two travel lanes eastbound and westbound
- On-ramps and off-ramps are "squared up" to create standard intersections and increase traffic calming
- Existing walkways are closed to pedestrians to concentrate users in the median. If pedestrian access is not controlled, then the traffic flow benefits will not be realized when both left turn and right turn movements are interrupted by pedestrians.
- Pedestrians are directed to the buffered multi-use path
- New pedestrian and bicycle signals and signage
- Signalization will be prioritized for the multi-use path
- New crosswalks at the E. Mission Bay Drive-Clairemont Drive intersection
- New path that connects pedestrians and cyclists from the E. Mission Bay Drive-Clairemont Drive intersection to the main multi-purpose path in Mission Bay Park.

At first glance, the idea of running a multi-use trail down the center of a busy freeway overpass seems unsafe and difficult. However, most of the conflicts between vehicles, bikes and pedestrians can be addressed better with a center median solution than an outer edge solution. This is because all of the conflicts on this bridge are either the result of high volumes of right turning or left turning vehicles and the use of high speed on and off-ramps. Although extra special care needs to be provided for positive and safe operations that will prevent conflicts between left turning vehicles and through direction movement along the multi-use trail, this concept is feasible. The cross section shown on Figure 62 shows the width relationship of much of the median with the proposed geometry of the multi-use path. Figure 63 shows the special signals that will be needed at the beginning and the end of the median trail, as well as two locations along the interim portions of the path. Figure 64 is proposed to accommodate westbound cycling use on Clairemont Drive that needs to get onto the east end of the median trail. They would use this "jug handle" lane approach to position themselves to cross in a bike crosswalk that is adjacent to the pedestrian crosswalk. Figure 65 shows a form of curb with candlestick markers placed on top of the raised curb to denote that a barrier exists. This would be proposed at each of the ends and the interim breaks in the system. Figure 66 shows some of the devices and signage that can be added on top of these raised curbs. Figure 67 indicates the need for pole mounted bike actuators for the special intersection crossings, along with signage denoting a pavement detector loop where the rider can trigger a light change. It should be noted, however, that in most cases, the movement across the intersections would be kept green until a vehicle needs to cross the path with a left turning motion or a through motion. The concept also requires the restriction of pedestrian use on the walkways at the edge of the bridges. These routes have multiple conflicts, very limited buffering from cars, and are located against a railing system that is too low to avoid a potential trip and fall over the railing. In addition, the bridges do not meet Caltrans standards for fencing to help prevent someone dropping something over the edge of the freeway. Pedestrian access restrictions and barriers would have to be created similar to what is shown on Figure 68. It appears that a median based solution could actually work in this situation. Figure 69 shows some of the detailed solutions necessary to make this intersection work and Figure 70 shows the entire path system, along with connections to other facilities.

11 x 17 Figures 4

11 x 17 Figures 5

11 x 17 Figures 6

11 x 17 Figures 7

11 x 17 Figures 8

11 x 17 Figures 11

11 x 17 Figures 13

11 x 17 Figures 14

blank

11 x 17 Figures 15

11 x 17 Figures 18

11 x 17 Figures 19

11 x 17 Figures 19

11 x 17 Figures 20

11 x 17 Figures 21

11 x 17 Figures 22

11 x 17 Figures 26

11 x 17 Figures 30

11 x 17 Figures 38

11 x 17 Figures 41

11 x 17 Figures 46

11 x 17 Figures 47

11 x 17 Figures 48

11 x 17 Figures 49

11 x 17 Figures 50

11 x 17 Figures 51

11 x 17 Figures 52

11 x 17 Figures 53

11 x 17 Figures 54

11 x 17 Figures 55

11 x 17 Figures 56

11 x 17 Figures 57

11 x 17 Figures 58

11 x 17 Figures 59

11 x 17 Figures 62

6.5 Future Vehicular Mode Analysis

This section summarizes the findings of the preferred scenario traffic evaluation.

The future traffic conditions analysis is based on a comparison of daily traffic volumes and peak-hour operations under existing conditions, as described in Chapter 2, with Year 2035 traffic volumes and resulting peak-hour traffic operations at each study intersection under the following three planning scenarios as described in Chapter 3:

- Community Plan / Baseline 2035: Year 2035 traffic conditions with the approved land uses and planned street network under the currently adopted Community Plan.
- Preferred Land Use Alternative (Mid-term Street Network): Year 2035 traffic conditions under the preferred land use scenario with the proposed mid-term street network.
- Preferred Land Use Alternative (Long-term Street Network): Year 2035 Conditions with the preferred land use scenario and the proposed long-term street network

In addition, this assessment summarizes the preliminary land use scenario comparison that was conducted prior to the selection of the preferred land use alternative. During review of the preliminary land use scenario, a qualitative comparison of several additional design concept alternatives was also conducted and is summarized in this assessment.

6.5.1 Community Plan / Baseline 2035

The analysis of Baseline 2035 conditions is based on Year 2035 Conditions assuming development of adopted land uses and approved circulation network changes, as described in Chapter 3:

- Motor vehicle traffic lane configurations and capacity on each of the major and collector streets would remain unchanged under the adopted community plan.

- Morena Boulevard (north and south of the two splits with West Morena) and West Morena would remain designated as major streets. Since major streets are to be designed to 45 mile per hour (mph) design speeds, existing travel lane widths and intersection designs are expected to remain.

- Traffic capacity enhancements would be limited to the planned extension of Knoxville Street to West Morena Boulevard to provide a direct connection with the planned Tecolote station, while also allowing some motorists to avoid delays at the Morena/Tecolote intersection by providing an alternate route with a direct connection to West Morena.

<u>Daily Traffic Volumes & Segment Level of Service –Baseline 2035</u>

Daily traffic volumes under Baseline 2035 conditions were determined by City of San Diego staff utilizing the SANDAG Series 12 travel demand model. Table 6-1 provides a comparison of Existing and Baseline 2035 daily traffic volumes at each of the 33 study segment locations under Future Baseline conditions.

Based on the travel demand model forecast:

- Clairemont Drive: Traffic volumes on Clairemont Drive are forecast to increase by approximately 40 percent under Baseline 2035 conditions with volumes exceeding 40,000 daily vehicles.
- Morena Boulevard: Traffic volumes on segments of Morena Boulevard and West Morena are forecast to fluctuate by segment. On the northernmost segments (north of Ingulf Street), traffic volumes would increase by less than 10 percent with volumes ranging from 12,000 to 19,400 daily vehicles. Volumes would increase by nearly 30 percent just north of Tecolote Road, while volumes are forecasted to decrease to the south of Tecolote Road to approximately 14,000 daily vehicles. The highest volume segment on Morena Boulevard – the one-block segment north of Napa Street that currently carries 29,000 daily vehicles – would increase by over 20 percent to carry 36,000 daily vehicles under Baseline 2035.
- West Morena Boulevard: with a capacity of approximately 40,000 daily vehicles, significant excess capacity would remain on West Morena under Baseline 2035 conditions. Traffic volumes are forecast to increase between 4,000 to 8,000 daily vehicles compared to existing volumes, representing an increase ranging from 30 to 67 percent. Total daily traffic volumes would range from 15,800 to 18, 400 daily vehicles, still well below capacity.
- Linda Vista Road: Traffic volumes on Linda Vista Road are forecast to drop slightly, by approximately five percent, under Baseline 2035 conditions. However, LOS would still be unacceptable at the intersection of Linda Vista Road with Napa, as is the case under existing conditions.
- Traffic volumes at key gateways: Traffic volumes entering and exiting the study area from the south, via Morena Boulevard, would increase by approximately 13 percent. Traffic volumes entering and existing the study area from the north, via Morena Boulevard, are forecast to remain relatively constant, with an anticipated increase of just three percent.

In comparison with the recommended plan, traffic volume would increase by a large amount under the future baseline because:

- The anticipated mix of land uses under the adopted community plan includes substantially more commercial development, but less residential development, than under the recommended plan.
  - Commercial development generates more trips on a “per square foot” basis than residential development, while attracting more trips from outside of the study area.
  - Residential development generates more local trips, such as trips from home to local shops, restaurants and services.

- Traffic capacity on West Morena would be greatest under the adopted community plan since current travel lanes and design speeds would remain. As a result, the use of the Morena Boulevard corridor as a cut-through route would be greatest under the adopted community plan. Nonetheless, excess capacity would remain on West Morena and Morena under all three alternatives.

Segment #	Street Name	Segment Location	EXISTING CONDITONS				FUTURE BASELINE			
			Street Classification	City of San Diego LOS E Threshold	Daily Volume*	Daily LOS (1)	Street Classification	City of San Diego LOS E Threshold	Daily Volume	Daily LOS (1)
1	**Gesner St.**	(Morena Bl - Denver St)	Local	(see note 2)	3,556		Local	(see note 2)	3,900	
2	**Clairemont Dr.**	(I-5 NB Ramps - Denver St)	4-Lane Major	40,000	30,826	D	4-Lane Major	40,000	43,100	F
3	**Ingulf St.**	(Morena Bl - Denver St)	Local	(see note 2)	5,185		Local	(see note 2)	9,000	
4	**Denver St.**	(Clairemont Dr - Ingulf St)	Local	(see note 2)	10,064		Local	(see note 2)	12,400	
5	**Morena Bl.**	(North of Gesner St)	4-Lane Major	40,000	13,508	A	4-Lane Major	40,000	13,900	A
6	**Morena Bl.**	(Gesner St - Ingulf St)	4-Lane Major	40,000	11,397	A	4-Lane Major	40,000	12,100	A
7	**Morena Bl.**	(Ingulf St - Milton St)	4-Lane Major	40,000	14,805	A	4-Lane Major	40,000	16,700	B
8	**Morena Bl.**	(Milton St - Ashton St)	4-Lane Major	40,000	15,964	B	4-Lane Major	40,000	18,600	B
9	**Morena Bl.**	(Ashton St - Morena Bl N Split)	4-Lane Major	40,000	15,598	B	4-Lane Major	40,000	19,400	B
10	**W Morena Bl.**	(Morena Bl N Split - Vega St)	4-Lane Major	40,000	10,149	A	4-Lane Major	40,000	15,800	B
11	**W Morena Bl.**	(Vega St - Buenos Ave)	4-Lane Major	40,000	11,014	A	4-Lane Major	40,000	18,400	B
12	**W Morena Bl.**	(Buenos Ave - Morena Bl)	4-Lane Major	40,000	13,312	A	4-Lane Major	40,000	17,300	B
13	**Morena Bl.**	(W Morena Bl - Napa St)	4-Lane Major (Classification) 5-Lane Major (Existing Geometry)	45,000	29,923	C	4-Lane Major (Classification) 5-Lane Major (Existing Geometry)	45,000	36,200	D
14	**Morena Bl.**	(Napa/Sherman St - Linda Vista Rd)	4-Lane Major (Classification) 5-Lane Major (Existing Geometry)	50,000	23,023	B	4-Lane Major (Classification) 5-Lane Major (Existing Geometry)	50,000	21,500	B
15	**Morena Bl.**	(South of Linda Vista Rd)	4-Lane Major	40,000	38,383	D	4-Lane Major	40,000	43,200	F
16	**Morena Bl.**	(W Morena Bl - Knoxville St)	2-Lane Collector (no center turn-lane)	10,000	9,171	D	2-Lane Collector (no center turn-lane)	10,000	10,500	E
17	**Morena Bl.**	(Knoxville St - Tecolote Rd)	4-Lane Collector	30,000	17,469	C	4-Lane Collector	30,000	22,500	D
18	**Morena Bl.**	(Tecolote Rd - Buenos Ave)	2-Lane Collector with left-turn lane	15,000	16,020	F	2-Lane Collector with left-turn lane	15,000	13,400	E
19	**Morena Bl.**	(Buenos Ave - Morena Bl S Split)	2-Lane Collector with left-turn lane	15,000	16,603	F	2-Lane Collector with left-turn lane	15,000	13,900	E
20	**Napa St.**	(Morena Blvd - Linda Vista Rd)	4-Lane Major	40,000	24,812	C	4-Lane Major	40,000	21,800	C
21	**Napa St.**	(Linda Vista Rd - Riley St)	4-Lane Major	40,000	17,681	B	4-Lane Major	40,000	20,400	A
22	**Napa St.**	(Riley St - Friars Rd)	4-Lane Major	40,000	13,920	A	4-Lane Major	40,000	22,100	B
23	**Milton St.**	(East of Morena Bl)	2-Lane Collector (residential fronting)	8,000	3,821	C	2-Lane Collector (residential fronting)	8,000	7,300	E
24	**Knoxville St.**	(Morena Bl - Savannah St)	Local	(see note 2)	1,149		Local	(see note 2)	3,400	
25	**Sea World Dr.**	(Morena Bl - I-5 NB Ramps)	4-Lane Major	40,000	24,513	B	4-Lane Major	40,000	33,700	C
26	**Buenos Ave.**	(South of Cudahy Pl)	Local	(see note 2)	1,174		Local	(see note 2)	2,000	
27	**Cudahy Pl.**	(East of Buenos Ave)	Local	(see note 2)	1,120		Local	(see note 2)	2,000	
28	**Sherman St.**	(Morena Bl - Grant St)	Local	(see note 2)	7,389		Local	(see note 2)	6,700	
29	**Linda Vista Rd.**	(Morena Bl - Napa St)	4-Lane Major	40,000	22,603	B	4-Lane Major	40,000	21,800	B
30	**Linda Vista Rd.**	(Napa St - Marian Wy)	4-Lane Major	40,000	26,868	B	4-Lane Major	40,000	24,700	C
31	**Riley St.**	(Napa St - Lautetta St)	Local	(see note 2)	1,787		Local	(see note 2)	1,800	
32	**Friars Rd.**	(Napa St - Colussa St)	4-Lane Major	40,000	19,550	A	4-Lane Major	40,000	18,300	A
33	**Friars Rd.**	(West of Napa St)	4-Lane Major	40,000	9,355	A	4-Lane Major	40,000	18,600	A

Notes:
1. City's Daily LOS Threshold is intended to be used planning purposes (but is not an EIR threshold).
2. City guidelines provide no daily volume LOS thresholds for local streets.

*24-hour volumes are shown above for the peak day of week (Friday 4/12/2013 at most segment count locations). The peak-day volumes is 5%-10% higher than Average Daily Traffic.

Source: Nelson\Nygaard (LOS); KTUA (Street Classification Map); True Count (Counts Conducted February and April 2013); City of San Diego Adopted CP ADT Plot (July 31, 2013)

Table 6-1: Baseline 2035 – Daily Traffic Volume Comparison

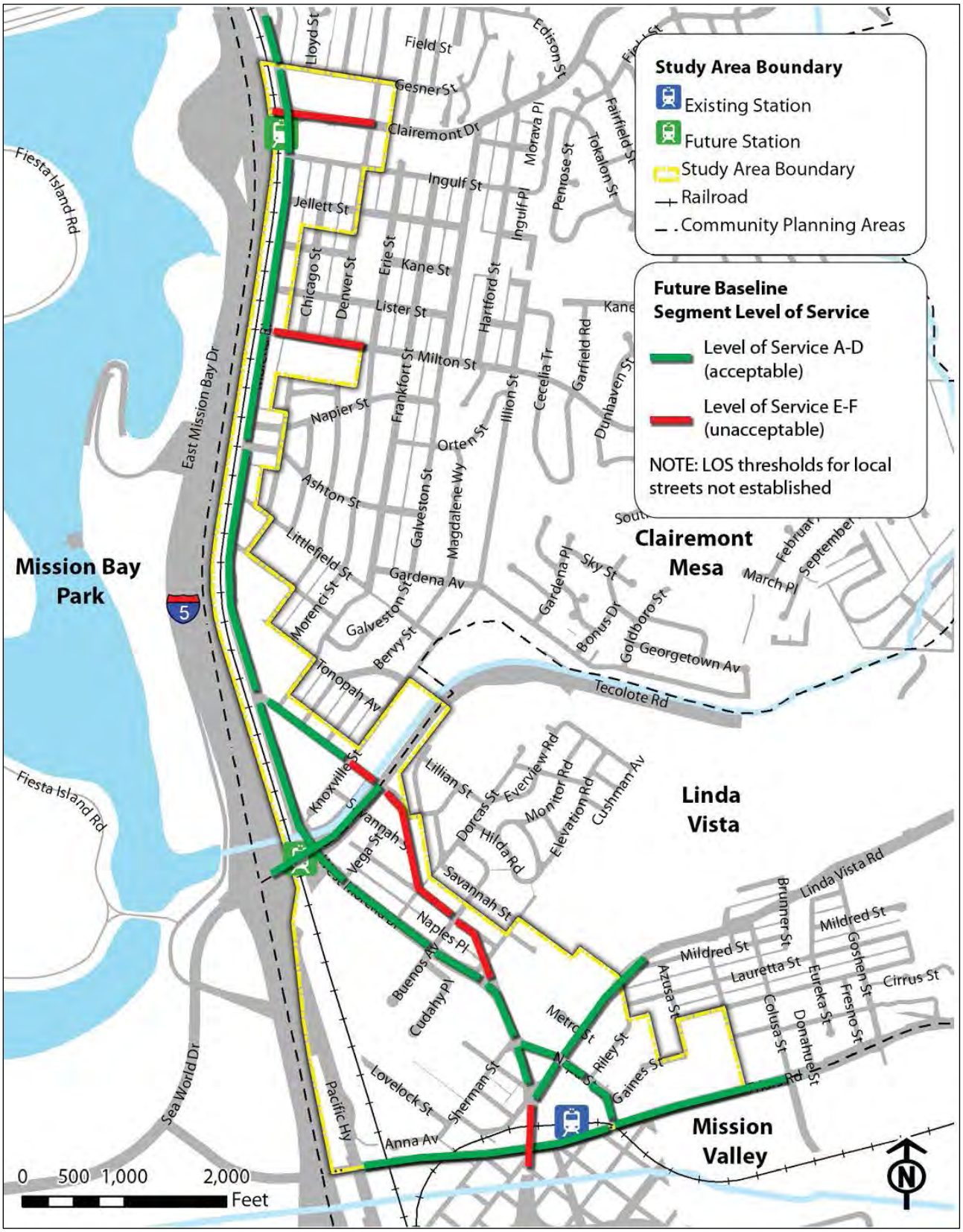


Figure 63: Future Baseline Segment LOS

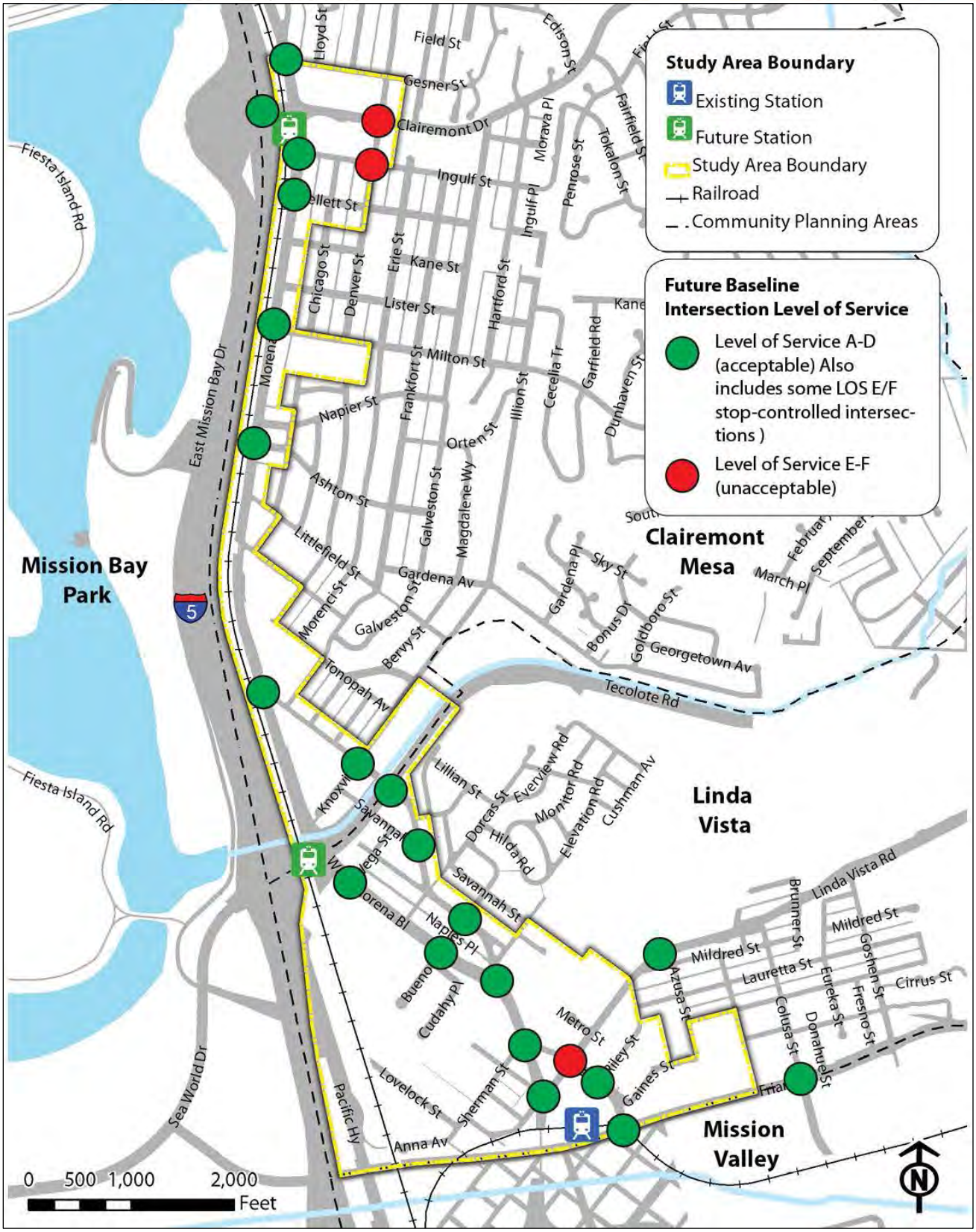


Figure 64: Future Baseline Intersection LOS

Peak Hour Traffic Volumes and Intersection Level of Service –Baseline 2035

Peak hour traffic volumes, intersection turning movements and peak-hour level of service at each study intersection were determined by Nelson\Nygaard based on the forecast change in daily traffic volumes on each approach segment. Turning movements were derived by factoring and balancing data consistent with National Cooperative Highway Research Program (NCHRP) 255 methodology. Based on the daily volume forecast, AM and PM peak hour volumes were forecasted based on the existing share of total daily traffic occurring each of the peak hours, applied to future baseline volumes. Turning movements at each study intersection were forecasted by adjusting existing turning movements to reflect changes in approach and departure volumes on upstream and downstream segments. The forecast also took into account "select-link" origin and destination forecasts, provided by city staff based on the Year 2035 model forecast for trips to and from key segments.

Table 6-2 provides a comparison of existing and baseline 2035 level of service (LOS) at each of the study intersections. Intersection LOS calculation sheets for future baseline conditions are provided in Appendix G. Each calculation sheet shows the forecast turning movements at each study intersection.

		EXISTING CONDITIONS				YEAR 2035 - FUTURE BASELINE			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection #	Intersecting Streets (signalized unless indicated otherwise)	LOS	Avg Delay	LOS	Avg Delay	LOS	Avg Delay	LOS	Avg Delay
1	Morena & Gesner	A	<10	B	10	A	<10	B	10
2	I-5 Northbound Ramps & Clairmont	B	12	A	<10	C	21	C	30
3	Morena & Ingulf	A	<10	A	<10	A	<10	B	13
4	Denver & Clairemont	D	38	C	24	**F**	**>80**	**E**	**75**
5	Morena & Jellet (side-street stop-sign)	C (1)	16	C (1)	18	B (1)	15	C(1)	18
6	Denver & Ingulf (all-way stop-signs)	A (1)	10	C (1)	17	C (1)	23	**F(1)**	**>50**
7	Morena & Milton	B	10	A	8	B	11	A	<10
8	Morena & Ashton	A	<10	A	7	A	<10	A	<10
9	Morena & West Morena *(north split)*	B	11	B	11	B	12	B	12
10	Knoxville & East Morena	C	22	B	12	D	35	B	14
11	Morena & Tecolote	C	30	C	33	D	37	C	33
12	Morena & Savannah (side-street stop-sign)	C (1)	19	E (1)(2)	38	C (1)	19	E (1)(2)	38
13	East Morena & Buenos	B	14	B	13	B	14	B	12
14	West Morena & Morena *(south split)*	A	<10	B	15	B	12	B	15
15	N/A								
16	West Morena & Vega / Driveway	A	<10	A	10	A	<10	B	12
17	West Morena & Buenos	B	13	B	13	B	12	B	16
18	Morena & Napa & Sherman	D	46	D	51	D	47	D	48
19	Morena & Linda Vista	B	13	B	20	B	16	C	27
20	Napa & Linda Vista	D	51	**E**	**78**	D	50	**E**	**66**
21	Marian Wy & Linda Vista	D	36	B	18	C	35	B	17
22	Napa & Riley	B	15	B	14	B	15	B	15
23	Napa & Friars	B	19	B	14	D	49	C	21
24	Colusa & Friars	B	11	B	12	D	51	D	53

Bold indicates failing LOS of E or F based on City of San Diego criteria (excludes stop-controlled locations where signal warrants not met).

Notes:

1. Indicates stop-controlled intersection. (Average delay based on stop-controlled approaches only).
2. Side-street approach volume on Savannah does not trigger peak-hour signal warrant.

Table 6-2: Baseline 2035 – Peak Hour Level of Service Comparison

Key findings of the Community Plan – Baseline 2035 traffic operations analysis are that:

- Clairemont Drive: based on the 40 percent growth forecast on Clairemont Drive under Baseline 2035 conditions, the signalized intersection of Clairemont Drive and Denver Street would operate at LOS F during the AM peak hour, and LOS E during the PM peak hour.
- Morena Boulevard: traffic volumes on segments of Morena Boulevard and West Morena are forecast to fluctuate by segment. On the northernmost segments (north of Ingulf Street), traffic volumes would increase by less than 10 percent, while an increase of approximately 56 percent is forecast on the middle segment of West Morena near Vega Street, and a 30 percent increase is forecast on the segment of West Morena near Buenos Avenue.
- West Morena: with a capacity of approximately 40,000 daily vehicles, significant excess capacity would remain on West Morena under Year 2035 – Future Baseline conditions. Traffic volumes are forecast to increase by approximately 4,000 to 8,000 daily vehicles compared to existing volumes, representing an increase ranging from 30 to 67 percent. Total daily traffic volumes would range from 15,800 to 18, 400 daily vehicles – still well below capacity.
- Linda Vista Road: traffic volumes on Linda Vista Road are forecast to drop slightly, by approximately five percent, under future baseline conditions. However, LOS would still be unacceptable at the intersection of Linda Vista Road with Napa Street, as is the case under existing conditions.
- Traffic volumes at key gateways: traffic volumes entering and exiting the study area from the south, via Morena Boulevard, would increase by approximately 13 percent. Traffic volumes entering and existing the study area from the north, via Morena Boulevard, are forecast to remain relatively constant, with an anticipated increase of just three percent.

Unacceptable level of service (LOS) would be limited to the following intersections:

- Clairemont Drive and Denver Street (signalized intersection) would operate unacceptably due to an anticipated 40 percent increase in traffic volumes on Clairemont under Year 2035 Baseline conditions.
- Ingulf Street and Denver Street (stop-sign controlled intersection) would operate unacceptably based on increased traffic volumes of up to 74 percent on Ingulf, while traffic volume on Denver may increase by approximately 40 percent.
- The Napa Road and Linda Vista Road signalized intersection would continue to operate unacceptably, as is the case under existing conditions. Delays at the intersection are attributable to high volume conflicting left-turns and limited storage capacity on Napa Road between Morena Boulevard and Linda Vista Road given the short block length. The current design requires a “split-phase” signal operation with a lengthy 136-second peak-hour cycle, further increasing average delay.

6.5.2 Traffic Assessment of the Workshop Concept Alternatives

Prior to the selection of the preferred land use scenario and recommended mid-term and long-term transportation network improvements, several preliminary land use alternatives and roadway design concepts were proposed as described in Chapter 3.

Multi-modal Land Use Scenarios Evaluation

The initial evaluation of land use scenarios was based on a comparison of Baseline 2035 traffic volumes with a forecast of Year 2035 traffic volumes under the Moderately Aggressive Scenario Land Uses as described in Chapter 3.

Daily traffic volumes under Year 2035 conditions with the Moderately Aggressive Scenario Land Uses were determined by City of San Diego staff, utilizing the SANDAG Series 12 travel demand model, based on the following two transportation network scenarios:

- Moderately Aggressive Scenario Land Uses with the Approved Transportation Network.
  - Under this scenario, the Year 2035 transportation network would be identical to the Baseline 2035 transportation network.

- Moderately Aggressive Scenario Land Uses with Proposed Roadway Network.
  - Under this scenario, Morena Boulevard and West Morena would be reduced to one lane per direction between Linda Vista Road and Ingulf Street.

Table 6-3 provides a comparison of the Year 2035 traffic forecast under Baseline 2035 conditions and under both of the roadway network scenarios with the Moderately Aggressive Scenario Land Uses. As shown, traffic volumes would be substantially reduced in comparison with 2035 Baseline volumes, attributable to the reduction in commercial development while the increase in residential development would generate a greater portion of trips that would be internal to the study area. The traffic reduction would be greatest with the proposed lane reductions.

Segment #	Street Name	Segment Location	EXISTING CONDITONS				YEAR 2035		
			Current Street Classification	City of San Diego LOS E Threshold	Existing Daily Volume*	Daily LOS (1)	Baseline 2035 (Community Plan) with Adopted Transportation Network	Moderate Aggressive Land Use Scenario with Adopted Transportation Network	Moderate Aggressive Land Use Scenario -- with reduction to 1 lane per direction on Morena & West Morena)
1	**Gesner St.**	(Morena Bl - Denver St)	Local	(see note 2)	3,556		3,900	3,900	3,900
2	**Clairemont Dr.**	(I-5 NB Ramps - Denver St)	4-Lane Major	40,000	30,826	D	43,100	40,700	39,400
3	**Ingulf St.**	(Morena Bl - Denver St)	Local	(see note 2)	5,185		9,000	6,100	5,600
4	**Denver St.**	(Clairemont Dr - Ingulf St)	Local	(see note 2)	10,064		12,400	8,800	8,400
5	**Morena Bl.**	(North of Gesner St)	4-Lane Major	40,000	13,508	A	13,900	10,400	9,900
6	**Morena Bl.**	(Gesner St - Ingulf St)	4-Lane Major	40,000	11,397	A	12,100	13,700	11,400
7	**Morena Bl.**	(Ingulf St - Milton St)	4-Lane Major	40,000	14,805	A	16,700	12,500	13,400
8	**Morena Bl.**	(Milton St - Ashton St)	4-Lane Major	40,000	15,964	B	18,600	16,200	15,300
9	**Morena Bl.**	(Ashton St - Morena Bl N Split)	4-Lane Major	40,000	15,598	B	19,400	15,000	13,500
10	**W Morena Bl.**	(Morena Bl N Split - Vega St)	4-Lane Major	40,000	10,149	A	15,800	12,600	9,900
11	**W Morena Bl.**	(Vega St - Buenos Ave)	4-Lane Major	40,000	11,014	A	18,400	13,400	11,200
12	**W Morena Bl.**	(Buenos Ave - Morena Bl)	4-Lane Major	40,000	13,312	A	17,300	15,300	11,000
13	**Morena Bl.**	(W Morena Bl - Napa St)	4-Lane Major (Classification) 5-Lane Major (Existing Geometry)	45,000	29,923	C	36,200	25,400	20,000
14	**Morena Bl.**	(Napa/Sherman St - Linda Vista Rd)	4-Lane Major (Classification) 5-Lane Major (Existing Geometry)	50,000	23,023	B	21,500	19,200	16,700
15	**Morena Bl.**	(South of Linda Vista Rd)	4-Lane Major	40,000	38,383	E	43,200	42,100	38,700
16	**Morena Bl.**	(W Morena Bl - Knoxville St)	2-Lane Collector (no center turn-lane)	10,000	9,171	D	10,500	8,200	8,600
17	**Morena Bl.**	(Knoxville St - Tecolote Rd)	4-Lane Collector	30,000	17,469	C	22,500	18,500	19,900
18	**Morena Bl.**	(Tecolote Rd - Buenos Ave)	2-Lane Collector with left-turn lane	15,000	16,020	F	13,400	15,900	18,800
19	**Morena Bl.**	(Buenos Ave - Morena Bl S Split)	2-Lane Collector with left-turn lane	15,000	16,603	F	13,900	13,900	12,600
20	**Napa St.**	(Morena Blvd - Linda Vista Rd)	4-Lane Major	40,000	24,812	C	21,800	20,000	19,500
21	**Napa St.**	(Linda Vista Rd - Riley St)	4-Lane Major	40,000	17,681	B	20,400	18,700	17,900
22	**Napa St.**	(Riley St - Friars Rd)	4-Lane Major	40,000	13,920	A	22,100	20,500	19,600
23	**Milton St.**	(East of Morena Bl)	2-Lane Collector (residential fronting)	8,000	3,821	C	7,300	4,000	4,100
24	**Knoxville St.**	(Morena Bl - Savannah St)	Local	(see note 2)	1,149		3,400	2,500	2,600
25	**Sea World Dr.**	(Morena Bl - I-5 NB Ramps)	4-Lane Major	40,000	24,513	B	33,700	28,400	29,600
28	**Sherman St.**	(Morena Bl - Grant St)	Local	(see note 2)	7,389		6,700	9,200	7,200

Table 6-3: Daily Traffic Volume Comparison – Preliminary Land Use Scenario Evaluation

6.5.3 Workshop Alternative Street Design Concepts

As described in Chapter 3, several preliminary design concepts were considered during review of the preliminary land use scenario.

North Morena / West Morena preliminary concepts with Moderately Aggressive land use scenario:

- Concept 1: remove one southbound lane (north of Knoxville Street) to provide one southbound and two northbound lanes.
- Concept 2: remove one lane in both direction (north of Knoxville Street) to provide one lane per direction.
- Concept 3: remove one lane in both directions (north of the southernmost intersection of Napa Road/West Morena Boulevard) to provide one lane per direction.

The proposed lane reductions would operate acceptably given excess capacity on West Morena, and on the northern segments of Morena Boulevard. Two-lane streets with center turns can typically accommodate 20,000 daily vehicles – and even more if side-street volumes are low. The side-street volumes at intersections on West Morena and northern segments of Morena Boulevard are very low - under 4,000 on most side streets, while the West Morena/Morena intersection (north split) also has a low side-street volume of just 8,000. Given these low side-street volumes, the northern segments of Morena could likely carry as much as 24,000 daily vehicles with one lane per direction (assuming short pedestrian crossing distances, which allow maximum green-time for Morena).

Based on the preliminary land use scenario model runs:

- Volumes on Morena Boulevard (north of the intersection with East Morena) and on East Morena would be 11,000 to 15,000 daily with one lane per direction, or 11,000 to 17,000 daily with two lanes per direction. Based on that comparison, traffic would be slightly higher on some segments if two lanes per direction are maintained - an average of about 2,000 additional daily vehicles. In either case, the volume would be well under the true capacity.
- Volumes on the segment of Morena Boulevard just north of Napa would be 20,000 daily with one lane per direction, or 25,000 daily with two lanes per direction.
- Volumes on the portion of Morena Boulevard just south of Tecolote Road – which currently has one lane per direction – would increase from approximately 16,000 daily vehicles (if two lanes per direction are maintained on West Morena) to 19,000 daily vehicles (if West Morena is reduced to one lane per direction). This reflects a diversion of a portion of freeway-bound trips from West Morena.

Considering each lane option in conjunction with options at the south end:

- Motor vehicle travel speeds would be lower with fewer lanes, potentially enhancing pedestrian and bicyclists safety near the two proposed light-

rail stations. Speeds of less than 35 miles per hour (mph) are advisable in walkable, urban districts.

- If the roundabout option were chosen for intersections to the south, then reducing to one lane per direction on West Morena and North Morena would help to reduce conflicting movements at the West Morena / Morena (south split) intersection. However, the volume of conflicting movements would still be relatively high.
- With a T-intersection at the south split, maintaining two lanes per direction to the north would likely reduce conflicting movements in that case (since turning movement from East Morena would be conflicting in that case), but the effect on intersection LOS would not likely be significant.
- Traffic volumes on Morena Boulevard (just south of Tecolote Road) could up to 20 percent higher, increasing from 16,000 to 19,000 daily based on the model forecast, if West Morena (and other segments of Morena north and south of the intersections with West Morena) were reduced to one lane per direction.
- Traffic volumes on the southern portion of Morena Boulevard (just north of Napa) would be up to 20 percent lower, decreasing from 25,000 to 20,000 daily based on the model forecast, if reduced to one lane per direction.
- Traffic volumes on the northern portion of Morena Boulevard would be up to lower with the proposed lane reduction, with a reduction in traffic volumes averaging approximately 15 percent.

South Morena concepts with Moderately Aggressive land use scenario:
Design concepts for intersection reconfigurations on the southern portions of Morena Boulevard are described in Chapter 3 are described as follows:

- Concept 1: T-intersection at Morena / West Morena (south split)
  - This concept would also include a lane reduction on Morena southbound (approaching the Napa Street/Sherman Street intersection). The current approach provides four southbound lanes (two left-turn and two through lanes). Under this concept, three southbound lanes would be provided. Given the high left-turn volumes (southbound from Morena Boulevard to Napa Street) the recommended configuration with three lanes would provide two left-turn lanes and one through lane.
- Concept 2: T-intersection at Morena / West Morena (south split) + "triangle-about" where Morena Boulevard, Napa Street and Linda Vista Road intersect
  - This concept would orient traffic in a one-way counterclockwise loop
  - Intersections of Napa Street with Linda Vista Road and Morena Boulevard would remain signalized
  - Morena Boulevard/Linda Vista Road intersection would be unsignalized, with yield-controlled turning movements.

- Concept 3: Roundabouts at Morena / West Morena (south split) & Morena/Napa
  - Although originally proposed as one-lane roundabouts, the high volume of traffic between the two roundabouts – over 20,000 daily vehicles – and the high volume of conflicting left-turns at both locations would require two lanes through most of both roundabouts.

A comparative analysis of potential level of service (LOS) was conducted as shown on Table 6-4, based on design parameters that indicated the following:

- Morena / West Morena (south split):
  - Concept 1 and 2: the proposed T-intersection at Morena/West Morena (south split) would operate acceptably.
  - Concept 3: although delay-based LOS would be potentially acceptable under the proposed roundabout configuration, the high volume of conflicting traffic – northbound left-turn that would cross paths with a high volume of southbound through movements -- would result in lengthy peak-hour queues.

- Morena / Napa:
  - Concept 1: would operate acceptably with two left-turn lanes and one through lane on southbound approach
  - Concept 2: under the proposed "triangle-about" configuration, intersection operations would improve given the elimination of most conflicting movements. The vast majority of southbound traffic would continue straight south on Morena, while the vast majority of northbound traffic would make a right-turn from Napa Street to Morena Boulevard. Conflicting movement would be limited to the much lower volume of traffic entering and exiting Sherman Street.
  - Concept 3: under the proposed roundabout configuration, the high volume of conflicting traffic – southbound left-turn that would cross path with a high volume of northbound through movements – would result in lengthy peak-hour queues.

- Morena Boulevard / Linda Vista Road:
  - Concept 2: under the proposed "triangle-about" configuration, the intersection would continue to operate acceptably. Refinement of this configuration would be necessary to accommodate pedestrian movements and the downstream "weave" approaching Napa/Linda Vista (described below).
  -
- Napa Street / Linda Vista Road:
  - Concept 2: would operate acceptably based on anticipated volume.
  - However, lane refinements would be needed for the one-block segment between Morena Boulevard and Napa Street to accommodate the "weave" that would occur between southbound traffic, the left-turn from Morena to Linda Vista, and northbound traffic that would make a right-turn from Morena to Linda Vista.

Southbound traffic would mostly continue east on Linda Vista or south on Napa, while a substantial portion of northbound traffic would make a left-turn from Linda Vista to Napa. As a result, southbound and northbound traffic would cross paths within the one-block segment between Morena and Linda Vista.

		PRELIMINARY LEVEL OF SERVICE COMPARISON - PM PEAK HOUR													
		YEAR 2013		YEAR 2035											
		EXISTING CONDITIONS		2035 BASELINE Adopted Land Uses + Baseline Road Network		ALTERNATIVE A Proposed Land Use + Baseline Road Network			ALTERNATIVE B Proposed Land Uses + Proposed Road Network*		ALTERNATIVE B+R *(Alt B with proposed roundabouts)*		ALTERNATIVE B+T *(Alt B w/ proposed T-intersection & 1-way triangle loop)*	
Intersection #	Streets	LOS	Avg Delay	LOS	Avg Delay	LOS	Avg Delay	Proposed Roadway Network Change (Alternative B)	LOS	Avg Delay	LOS	Avg Delay	LOS	Avg Delay
1	Morena & Gesner	B	10	B	12	B	11	Reduce to 1 through lane on Morena in both directions.	B	11	B	11	B	11
3	Morena & Ingulf	B	12	B	14	B	12	Reduce to 1 through lane on Morena in both directions.	B	14	B	14	B	14
9	Morena & West Morena *(north split)*	B	11	B	13	B	12	Reduce to 1 through lane on Morena & West Morena.	B	14	B	14	B	14
10	Knoxville & Morena	B	12	B	13	B	11	Extension of Knoxville to connect with West Morena	B	13	B	13	B	13
11	Morena & Tecolote	D	48	D	48	D	48	None -- LOS change reflects trip diversion at south split.	D	<55	**E**	**60**	D	<55
14	West Morena & Morena *(south split)*	A	10	A	13	B	15	Reduction to 1 lane in each direction on W Morena & north of split.	B	20	C	29	C	22
18	Morena & Napa & Sherman	D	52	D	47	D	42	Reduction to 1 through lane on Morena (NB & SB) & 1-way conversion under B+T	D	47	D/E	<55	B	<20
19	Morena & Linda Vista	B	20	B	25	C	26	No change under B or B+R. (1-way conversion under B+T).	C	21	C	<35	A	<10
20	Napa & Linda Vista	**E**	**78**	**F**	**>80**	**F**	**>80**	No change under B or B+R. (1-way conversion under B+T).	**E**	**78**	**E**	**78**	C	21
Bold indicates failing LOS of E or F based on City of San Diego criteria. (Avg delay in seconds for motorists)															
Scenarios:															
YEAR 2035 BASELINE: Adopted Land Uses + Baseline Road Network															
YEAR 2035 ALTERNATIVE A: Proposed Land Uses + Baseline Road Network															
YEAR 2035 ALTERNATIVE B: Proposed Land Uses + Proposed Road Network (lane reductions)*															
YEAR 2035 ALTERNATIVE B: Proposed Land Uses + Proposed Road Network (lane reductions)*															
YEAR 2035 ALTERNATIVE B+R: Alt B with proposed roundabouts.															
YEAR 2035 ALTERNATIVE B+T: Alt B with proposed 1-way triangle loop (Morena/Linda Vista/Napa) & proposed T-intersection at South Split.															
*LOS as shown under Alt B based on lane reductions with current basic configuration (without roundabouts or T-configuration).															
Preliminary LOS Comparison															

Table 6-4: Preliminary Land Use Scenario & Initial Concepts – Comparison of Potential Level of Service

6.5.4 Preferred Land Use Alternative (Mid-term)

The proposed future land use alternative was refined following the preliminary land use scenario evaluation. The Preferred Land Use Alternative is described in Chapter 3.

This section provides an analysis of the Preferred Land Use Scenario under the proposed "mid-term" roadway configuration in which the intersections of Napa Street, Morena Boulevard and Linda Vista Road would be reconfigured to orient the bulk of traffic in a counter-clockwise direction. The potential advantage of such a scenario is that the volume of conflicting left-turn movements – which currently result in delays at the intersections of Napa/Morena and Napa/Linda Vista – would be reduced.

Motor vehicle traffic capacity would be reduced on segments of Morena Boulevard and West Morena given the proposed reduction to one southbound lane. Narrower lanes would be installed to reduce motor vehicle speeds to approximately 30 to 35 mph, a speed that would be consistent with the collector street standard and intended to enhance pedestrian capacity. In addition, northbound capacity entering Morena from the south would be reduced with the proposed mid-term redesign of the Napa/Linda Vista intersection. Although the intent of the mid-term design would be to serve as an interim configuration, the mid-term analysis is based on Year 2035 land uses.

Daily Traffic Volumes and Segment LOS – Recommended Plan (Mid-term)

Daily traffic volumes under the Recommended Plan (Mid-term) were determined by the City of San Diego, utilizing the SANDAG Series 12 travel demand model. Table 6-6 provides a comparison of existing and future baseline daily traffic volumes at each of the 33 study segment locations under future baseline conditions. The table indicates the following changes to traffic volumes in comparison with existing and Baseline 2035 volumes:

- Clairemont Drive: traffic volumes would increase by 27 percent under the Mid-term configuration, a substantial reduction from the 40 percent increase under Baseline 2035 conditions. Daily volumes would approach 40,000 vehicles.
- Morena Boulevard (north): traffic volumes are forecasted to remain relatively constant on the northernmost segments, with relatively little change from existing volumes. Daily traffic volumes would range from 12,000 to 16,000 vehicles, and excess capacity would remain.
- Morena Boulevard (east): Traffic volumes would increase on segments nearest Tecolote Road by approximately 14 percent, reflecting some diversion of freeway-bound trips from West Morena to Morena/Tecolote given the proposed lane reduction on West Morena. Daily volumes would be approximately 16,000 vehicles immediately south of Tecolote.
- Morena Boulevard (south): traffic volumes would decrease by approximately 25 percent compared to existing volumes on the segment north of the Morena/Napa intersection. Daily volumes would be approximately 22,000 vehicles.
- West Morena: traffic volumes would fluctuate by segment, with little change from existing volumes at the southern end of West Morena, while traffic volumes would increase by 30 to 40 percent near the Tecolote Station. Total traffic

volume would range from 13,000 to 16,000 daily vehicles, and excess capacity would remain.

- Linda Vista Road: between 27,000 to 29,000 vehicles, representing an increase of approximately three percent to the east of Napa Street. Volumes would increase by approximately 28 percent on the one-block segment between Morena Boulevard and Napa Street due to the prohibition on southbound left-turns from Morena to Napa that would re-route that traffic to make the left-turn directly from Morena to Linda Vista.
- Traffic volumes at key gateways: Traffic volumes entering and exiting the study area from the south, via Morena Boulevard, would increase by a reduced amount compared to the future baseline.

Peak-hour Level of Service – Recommended Circulation Plan (Mid-term)

Peak hour traffic volumes, intersection turning movements and peak-hour level of service at each study intersection were determined by Nelson\Nygaard, based on the forecast change in daily traffic volumes on each approach segment. The share of total daily traffic occurring between the AM and PM Peak Hours, respectively, were forecasted based on the existing share of total daily traffic occurring each of the peak hours, applied to future baseline volumes. Turning movements at each study intersection were forecasted by adjusting existing turning movements to reflect changes in approach and departure volumes on upstream and downstream segments, and also taking into account "select-link" origin and destination forecasts, provided by city staff based on the Year 2035 model forecast, for trips to and from key segments.

Table 6-6 provides a comparison of existing and future baseline level of service (LOS) at each of the study intersections. Intersection LOS calculation sheets for future baseline conditions are provided in Appendix xx. Each calculation sheet shows the forecast turning movements at each study intersection. The forecast increase in traffic volumes on both Clairemont Drive and Morena Boulevard would be reduced from the future baseline scenario.

Unacceptable level of service (LOS) would be limited to the following intersections:

- Clairemont Drive and Denver Street (signalized intersection) would operate unacceptably due to an anticipated increase in traffic volumes on Clairemont under Year 2035 conditions. Nonetheless, traffic growth on Clairemont would be reduced under the Recommended Plan land use alternative.
- Napa Street and Linda Vista Road (signalized intersection) would operate acceptably, eliminating the failing operations that occur under existing conditions.
- Morena Boulevard and Linda Vista Road (signalized intersection): unacceptable LOS F operations would result under the proposed Mid-Term configuration due to the reduction in northbound through capacity since just one northbound lane would be provided. Average queue lengths would be as long as 800'.
    - Provision of a second northbound lane would reduce delay, but lengthy queues would remain of approximately 400' while LOS E operations would potentially occur.

Segment #	Street Name	Segment Location	EXISTING CONDITONS				PREFERRED ALTERNATIVE (MID-TERM ROAD NETWORK)			
			Street Classification	City of San Diego LOS E Threshold	Daily Volume*	Daily LOS (1)	Street Classification	City of San Diego LOS E Threshold	Daily Volume	Daily LOS (1)
1	**Gesner St.**	(Morena Bl - Denver St)	Local	(see note 2)	3,556		Local	(see note 2)	3,900	
2	**Clairemont Dr.**	(I-5 NB Ramps - Denver St)	4-Lane Major	40,000	30,826	D	4-Lane Major	40,000	39,300	E
3	**Ingulf St.**	(Morena Bl - Denver St)	Local	(see note 2)	5,185		Local	(see note 2)	5,700	
4	**Denver St.**	(Clairemont Dr - Ingulf St)	Local	(see note 2)	10,064		Local	(see note 2)	8,400	
5	**Morena Bl.**	(North of Gesner St)	4-Lane Major	40,000	13,508	A	4-Lane Major	40,000	12,400	A
6	**Morena Bl.**	(Gesner St - Ingulf St)	4-Lane Major	40,000	11,397	A	4-Lane Major	40,000	12,100	A
7	**Morena Bl.**	(Ingulf St - Milton St)	4-Lane Major	40,000	14,805	A	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	14,800	C
8	**Morena Bl.**	(Milton St - Ashton St)	4-Lane Major	40,000	15,964	B	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	15,900	C
9	**Morena Bl.**	(Ashton St - Morena Bl N Split)	4-Lane Major	40,000	15,598	B	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	16,100	C
10	**W Morena Bl.**	(Morena Bl N Split - Vega St)	4-Lane Major	40,000	10,149	A	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	13,100	C
11	**W Morena Bl.**	(Vega St - Buenos Ave)	4-Lane Major	40,000	11,014	A	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	15,700	C
12	**W Morena Bl.**	(Buenos Ave - Morena Bl)	4-Lane Major	40,000	13,312	A	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	13,100	C
13	**Morena Bl.**	(W Morena Bl - Napa St)	4-Lane Major (Classification) 5-Lane Major (Existing Geometry)	45,000	29,923	C	4-Lane Collector	30,000	22,200	C
14	**Morena Bl.**	(Napa/Sherman St - Linda Vista Rd)	4-Lane Major (Classification) 5-Lane Major (Existing Geometry)	50,000	23,023	B	3-Lane Collector (1 northbound, 2 southbound) plus left-turn lanes	22,500	23,100	F
15	**Morena Bl.**	(South of Linda Vista Rd)	4-Lane Major	40,000	38,383	E	4-Lane Major	40,000	40,600	F
16	**Morena Bl.**	(W Morena Bl - Knoxville St)	2-Lane Collector (no center turn-lane)	10,000	9,171	E	2-Lane Collector (no center turn-lane)	10,000	7,700	D
17	**Morena Bl.**	(Knoxville St - Tecolote Rd)	4-Lane Collector	30,000	17,469	C	4-Lane Collector	30,000	20,000	C
18	**Morena Bl.**	(Tecolote Rd - Buenos Ave)	2-Lane Collector with left-turn lane	15,000	16,020	F	2-Lane Collector with left-turn lane	15,000	15,900	F
19	**Morena Bl.**	(Buenos Ave - Morena Bl S Split)	2-Lane Collector with left-turn lane	15,000	16,603	F	2-Lane Collector with left-turn lane	15,000	9,700	C
20	**Napa St.**	(Morena Blvd - Linda Vista Rd)	4-Lane Major	40,000	24,812	C	Major with 2 westbound lanes and 1 eastbound lane	30,000	14,800	B
21	**Napa St.**	(Linda Vista Rd - Riley St)	4-Lane Major	40,000	17,681	B	4-Lane Major	40,000	17,900	A
22	**Napa St.**	(Riley St - Friars Rd)	4-Lane Major	40,000	13,920	A	4-Lane Major	40,000	19,700	B
23	**Milton St.**	(East of Morena Bl)	2-Lane Collector (residential fronting)	8,000	3,821	C	2-Lane Collector (residential fronting)	8,000	3,000	C
24	**Knoxville St.**	(Morena Bl - Savannah St)	Local	(see note 2)	1,149		Local	(see note 2)	2,700	
25	**Sea World Dr.**	(Morena Bl - I-5 NB Ramps)	4-Lane Major	40,000	24,513	B	4-Lane Major	40,000	34,700	E
26	**Buenos Ave.**	(South of Cudahy Pl)	Local	(see note 2)	1,174		Local	(see note 2)	6,600	
27	**Cudahy Pl.**	(East of Buenos Ave)	Local	(see note 2)	1,120		Local	(see note 2)	9,600	
28	**Sherman St.**	(Morena Bl - Grant St)	Local	(see note 2)	7,389		Local	(see note 2)	15,400	
29	**Linda Vista Rd.**	(Morena Bl - Napa St)	4-Lane Major	40,000	22,603	B	Major with 2 eastbound lanes	20,000	29,000	F
30	**Linda Vista Rd.**	(Napa St - Marian Wy)	4-Lane Major	40,000	26,868	B	4-Lane Major	40,000	27,700	C
31	**Riley St.**	(Napa St - Lautetta St)	Local	(see note 2)	1,787		Local	(see note 2)	2,000	
32	**Friars Rd.**	(Napa St - Colussa St)	4-Lane Major	40,000	19,550	A	4-Lane Major	40,000	28,900	C
33	**Friars Rd.**	(West of Napa St)	4-Lane Major	40,000	9,355	A	4-Lane Major	40,000	19,200	B

Notes:

1. City's Daily LOS Threshold is intended to be used planning purposes (but is not an EIR threshold).
2. City guidelines provide no daily volume LOS thresholds for local streets.

*24-hour volumes are shown above for the peak day of week (Friday 4/12/2013 at most segment count locations). The peak-day volumes is 5%-10% higher than Average Daily Traffic.

Source: Nelson\Nygaard (LOS); KTUA (Street Classification Map); True Count (Counts Conducted February and April 2013); City of San Diego 2035 ADT w/Draft Final LU & Scenario 1 Network (January 8, 2014)

Table 6-5: Preferred Alternative (Mid-term) – Daily Traffic Volume Comparison

Intersection #	Intersecting Streets (signalized unless indicated otherwise)	EXISTING CONDITIONS				YEAR 2035 - PREFERRED ALTERNATIVE (MID-TERM CONFIGURATION)			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Avg Delay	LOS	Avg Delay	LOS	Avg Delay	LOS	Avg Delay
1	Morena & Gesner	A	<10	B	10	A	<10	B	11
2	I-5 Northbound Ramps & Clairmont	B	12	A	<10	B	16	B	15
3	Morena & Ingulf	A	<10	A	<10	A	<10	B	11
4	Denver & Clairemont	D	38	C	24	**F**	**>80**	D	50
5	Morena & Jellet (side-street stop-sign)	C (1)	16	C (1)	18	C (1)	15	D (1)	18
6	Denver & Ingulf (all-way stop-signs)	A (1)	10	C (1)	17	A	12	D (1)	17
7	Morena & Milton	B	10	A	<10	B	10	A	<10
8	Morena & Ashton	A	<10	A	<10	A	<10	A	<10
9	Morena & West Morena *(north split)*	B	11	B	11	B	12	B	12
10	Knoxville & East Morena	C	22	B	12	D	36	B	12
11	Morena & Tecolote	C	30	C	33	D	38	D	44
12	Morena & Savannah (side-street stop-sign)	C (1)	19	E (1)(2)	38	C (1)(2)	19	E (1)(2)	38
13	East Morena & Buenos	B	14	B	13	B	14	B	13
14	West Morena & Morena *(south split)*	A	<10	B	15	B	18	C	35
15	N/A								
16	West Morena & Vega / Driveway	A	<10	A	10	A	<10	B	10
17	West Morena & Buenos	B	13	B	13	B	14	B	14
18	West Morena & Sherman	D	46	D	51	C	21	C	31
19	West Morena & Linda Vista	B	13	B	20	**F**	**>80**	C	38
20	Napa & Linda Vista	D	51	**E**	**78**	C	26	C	26
21	Marian Wy & Linda Vista	D	36	B	18	D	45	C	35
22	Napa & Riley	B	15	B	14	B	14	B	14
23	Napa & Friars	B	19	B	14	C	20	B	15
24	Colusa & Friars	B	11	B	12	B	15	C	21

Bold indicates failing LOS of E or F based on City of San Diego criteria (excludes stop-controlled locations where signal warrants not met).

Notes:

1. Indicates stop-controlled intersection. (Average delay based on stop-controlled approaches only).
2. Side-street approach volume on Savannah does not trigger peak-hour signal warrant.

Table 6-6: Recommended Circulation Plan (Mid-term) – Peak Hour Level of Service Comparison

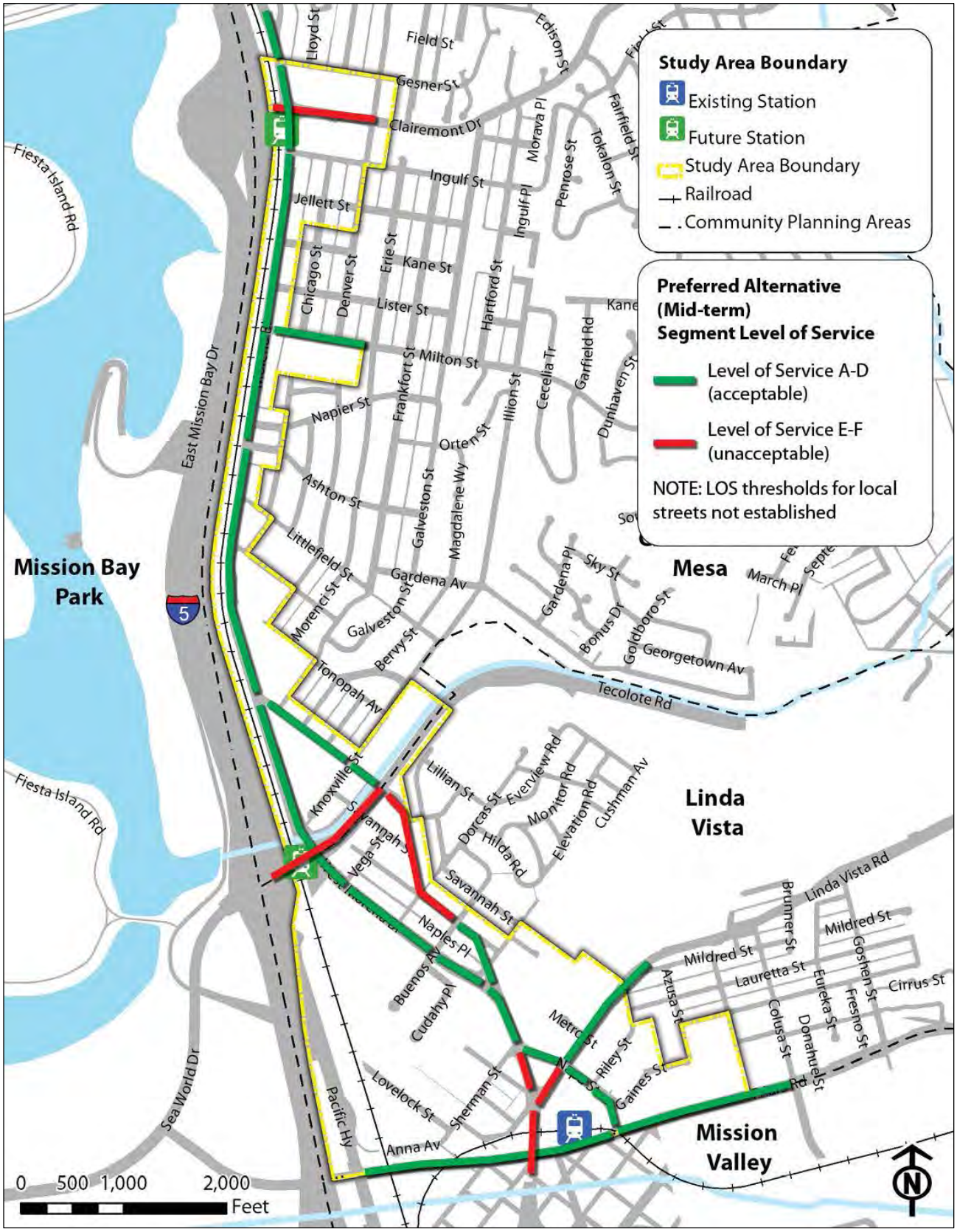


Figure 65: Mid-term Segment LOS

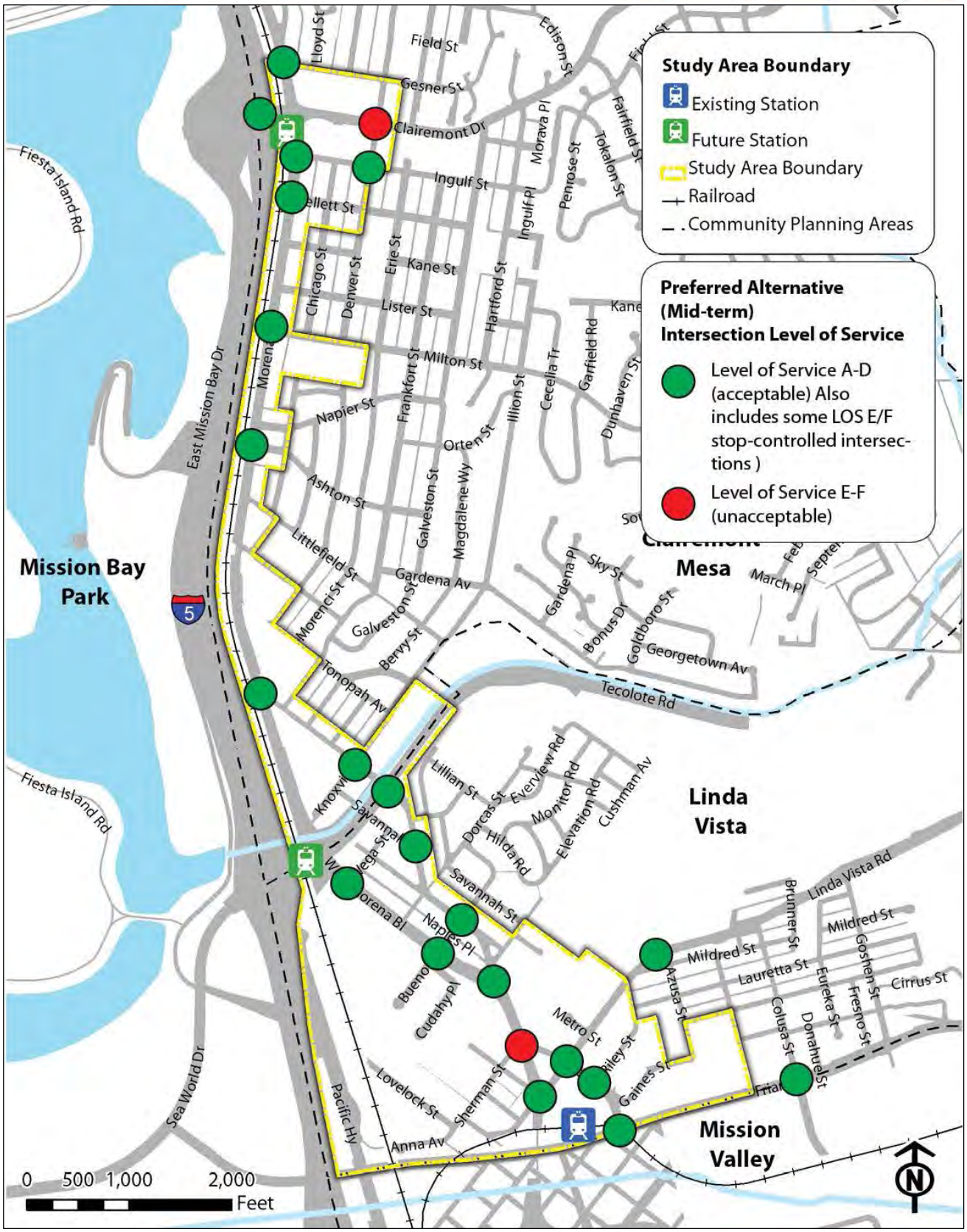


Figure 66: Mid-term Intersection LOS

6.5.5 Recommended Circulation Plan (Long-Term) – Extended Roadway Network Grid

Daily Traffic Volumes & Segment LOS – Recommended Plan (Long-term)

Daily traffic volumes under the Recommended Plan, with the proposed long-term roadway network configuration, were determined by the City of San Diego, utilizing the SANDAG Series 12 travel demand model. Table 6-7 provides a comparison of existing and future baseline daily traffic volumes at each of the 33 study segment locations under future baseline conditions. Key findings for key segments are as follows:

- Clairemont Drive: traffic volumes would increase by 23 percent under the Long-term configuration, a substantial reduction from the 40 percent increase under Baseline 2035 conditions. Daily volumes would approach 38,000 vehicles.
- Morena Boulevard (north): daily traffic volume would range from 12,000 to 16,000 vehicles, similar to the mid-term configuration, and excess capacity would remain.
- Morena Boulevard (east): Traffic volumes would increase on segments nearest Tecolote by up to 14 percent reflecting some diversion of freeway-bound trips from West Morena to Morena/Tecolote given the proposed lane reduction on West Morena. Daily volumes would be approximately 17,500 vehicles immediately south of Tecolote Road.
- West Morena Boulevard: traffic volumes would fluctuate by segment, with little change from existing volumes at the southern end of West Morena, while traffic volumes would increase by 30 to 40 percent near the Tecolote Station. Total traffic volume would range from 13,000 to 16,000 daily vehicles on the existing segments of West Morena (north of the current southern split with Morena Boulevard). Under the proposed long-term configuration, West Morena would continue south to Linda Vista without rejoining Morena Boulevard. Daily volumes would be 14,000 vehicles just north of Napa Street, increasing to 22,000 vehicles between Napa/Sherman and Linda Vista.
- Linda Vista: approximately 23,000 daily vehicles on segments near Napa Street, representing a decrease in traffic volumes compared to existing volumes that approach 27,000 daily vehicles.
- Traffic volumes at key gateways: Traffic volumes entering and exiting the study area from the south, via Morena Boulevard, would remain around 38,000 daily vehicles, with little change from existing conditions. Traffic volumes entering and existing the study area from the north, via Morena Boulevard, would decrease slightly from 13,900 daily under existing conditions to just over 12,000 daily.

Intersection Level of Service – Recommended Plan (Long-term)

Peak hour traffic volumes, intersection turning movements and peak-hour level of service at each study intersection were determined by Nelson\Nygaard based on the forecast change in daily traffic volumes on each approach segment. Turning movements were derived by factoring and balancing data consistent with National Cooperative Highway Research Program (NCHRP) 255 methodology. Based on the daily volume forecast, AM and PM peak hours volumes were forecasted based on the existing share of total daily traffic occurring during each of the peak hours, applied to future baseline volumes. Turning movements at each study intersection were forecasted by adjusting existing turning movements to reflect changes in approach and departure volumes on upstream and downstream segments, and also by taking into account "select-link" origin and destination forecasts, provided by city staff based on the Year 2035 model forecast, for trips to and from key segments.

Table 6-8 provides a comparison of Existing and Year 2035 – Recommended Plan level of service (LOS) at each of the study intersections under the proposed long-term roadway configuration. Intersection LOS calculation sheets for future baseline conditions are provided in Appendix xx. Each calculation sheet shows the forecast turning movements at each study intersection.

Unacceptable level of service (LOS) would be limited to the following intersections:

- Clairemont Drive and Denver Streets (signalized intersection) would operate unacceptably due to an anticipated increase in traffic volumes on Clairemont Drive under Year 2035 conditions. Nonetheless, traffic growth on Clairemont Drive would be reduced under the Recommended Plan land use alternative.
- Napa Street and Linda Vista (signalized intersection) would operate acceptably, eliminating the failing operations that occur under existing conditions.

Segment #	Street Name	Segment Location	EXISTING CONDITONS				PREFERRED ALTERNATIVE (LONG-TERM ROAD NETWORK)			
			Street Classification	City of San Diego LOS E Threshold	Daily Volume*	Daily LOS (1)	Street Classification	City of San Diego LOS E Threshold	Daily Volume	Daily LOS (1)
1	**Gesner St.**	(Morena Bl - Denver St)	Local	(see note 2)	3,556		Local	(see note 2)	4,000	
2	**Clairemont Dr.**	(I-5 NB Ramps - Denver St)	4-Lane Major	40,000	30,826	D	4-Lane Major	40,000	37,800	E
3	**Ingulf St.**	(Morena Bl - Denver St)	Local	(see note 2)	5,185		Local	(see note 2)	5,800	
4	**Denver St.**	(Clairemont Dr - Ingulf St)	Local	(see note 2)	10,064		Local	(see note 2)	8,600	
5	**Morena Bl.**	(North of Gesner St)	4-Lane Major	40,000	13,508	A	4-Lane Major	40,000	12,400	A
6	**Morena Bl.**	(Gesner St - Ingulf St)	4-Lane Major	40,000	11,397	A	4-Lane Major	40,000	16,100	A
7	**Morena Bl.**	(Ingulf St - Milton St)	4-Lane Major	40,000	14,805	A	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	15,200	D
8	**Morena Bl.**	(Milton St - Ashton St)	4-Lane Major	40,000	15,964	B	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	16,100	E
9	**Morena Bl.**	(Ashton St - Morena Bl N Split)	4-Lane Major	40,000	15,598	B	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	16,400	E
10	**W Morena Bl.**	(Morena Bl N Split - Vega St)	4-Lane Major	40,000	10,149	A	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	13,300	C
11	**W Morena Bl.**	(Vega St - Buenos Ave)	4-Lane Major	40,000	11,014	A	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	16,000	E
12	**W Morena Bl.**	(Buenos Ave - Morena Bl)	4-Lane Major	40,000	13,312	A	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	13,100	C
13	**Morena Bl.**	(W Morena Bl - Napa St)	4-Lane Major (Classification) 5-Lane Major (Existing Geometry)	45,000	29,923	C	3-Lane Collector (2 northbound, 1 southbound) plus left-turn lane	22,500	14,000	C
14	**Morena Bl.**	(Napa/Sherman St - Linda Vista Rd)	4-Lane Major (Classification) 5-Lane Major (Existing Geometry)	50,000	23,023	B	3-Lane Collector (1 northbound, 2 southbound) plus left-turn lane	22,500	22,500	F
15	**Morena Bl.**	(South of Linda Vista Rd)	4-Lane Major	40,000	38,383	E	4-Lane Major	40,000	38,000	E
16	**Morena Bl.**	(W Morena Bl - Knoxville St)	2-Lane Collector (no center turn-lane)	10,000	9,171	D	2-Lane Collector (no center turn-lane)	10,000	7,700	C
17	**Morena Bl.**	(Knoxville St - Tecolote Rd)	4-Lane Collector	30,000	17,469	C	4-Lane Collector	30,000	20,200	D
18	**Morena Bl.**	(Tecolote Rd - Buenos Ave)	2-Lane Collector with left-turn lane	15,000	16,020	F	2-Lane Collector with left-turn lane	15,000	17,500	F
19	**Morena Bl.**	(Buenos Ave - Morena Bl S Split)	2-Lane Collector with left-turn lane	15,000	16,603	F	2-Lane Collector with left-turn lane	15,000	16,500	E
20	**Napa St.**	(Morena Blvd - Linda Vista Rd)	4-Lane Major	40,000	24,812	C	Segment removed	N/A	N/A	
21	**Napa St.**	(Linda Vista Rd - Riley St)	4-Lane Major	40,000	17,681	B	4-Lane Major	40,000	17,000	A
22	**Napa St.**	(Riley St - Friars Rd)	4-Lane Major	40,000	13,920	A	4-Lane Major	40,000	19,000	B
23	**Milton St.**	(East of Morena Bl)	2-Lane Collector (residential fronting)	8,000	3,821	C	2-Lane Collector (residential fronting)	8,000	4,400	C
24	**Knoxville St.**	(Morena Bl - Savannah St)	Local	(see note 2)	1,149		Local	(see note 2)	2,700	
25	**Sea World Dr.**	(Morena Bl - I-5 NB Ramps)	4-Lane Major	40,000	24,513	C	4-Lane Major	40,000	34,700	D
26	**Buenos Ave.**	(South of Cudahy Pl)	Local	(see note 2)	1,174		Local	(see note 2)	4,200	
27	**Cudahy Pl.**	(East of Buenos Ave)	Local	(see note 2)	1,120		Local	(see note 2)	9,600	
28	**Sherman St.**	(Morena Bl - Grant St)	Local	(see note 2)	7,389		Local	(see note 2)	11,300	
29	**Linda Vista Rd.**	(Morena Bl - Napa St)	4-Lane Major	40,000	22,603	C	4-Lane Major	40,000	22,400	B
30	**Linda Vista Rd.**	(Napa St - Marian Wy)	4-Lane Major	40,000	26,868	C	4-Lane Major	40,000	23,300	C
31	**Riley St.**	(Napa St - Lautetta St)	Local	(see note 2)	1,787		Local	(see note 2)	1,800	
32	**Friars Rd.**	(Napa St - Colussa St)	4-Lane Major	40,000	19,550	B	4-Lane Major	40,000	27,700	C
33	**Friars Rd.**	(West of Napa St)	4-Lane Major	40,000	9,355	A	4-Lane Major	40,000	18,400	B

Notes:

1. City's Daily LOS Threshold is intended to be used planning purposes (but is not an EIR threshold).
2. City guidelines provide no daily volume LOS thresholds for local streets.

*24-hour volumes are shown above for the peak day of week (Friday 4/12/2013 at most segment count locations). The peak-day volumes is 5%-10% higher than Average Daily Traffic.

Source: Nelson\Nygaard (LOS); KTUA (Street Classification Map); True Count (Counts Conducted February and April 2013); City of San Diego 2035 ADT w/Draft Final LU & Scenario 2 Network (January 15, 2014)

Table 6-7: Recommended Circulation Plan (Long-term) – Daily Traffic Volume Comparison

Intersection #	Intersecting Streets (signalized unless indicated otherwise)	EXISTING CONDITIONS				YEAR 2035 - PREFERRED ALTERNATIVE (LONG-TERM CONFIGURATION)			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Avg Delay	LOS	Avg Delay	LOS	Avg Delay	LOS	Avg Delay
1	Morena & Gesner	A	<10	B	10	A	<10	A	<10
2	I-5 Northbound Ramps & Clairmont	B	12	A	<10	B	16	B	12
3	Morena & Ingulf	A	<10	A	<10	A	<10	B	13
4	Denver & Clairemont	D	38	C	24	**F**	**>80**	D	37
5	Morena & Jellet (side-street stop-sign)	C (1)	16	C (1)	18	C (1)	15	D (1)	34
6	Denver & Ingulf (all-way stop-signs)	A (1)	10	C (1)	17	A	23	D (1)	25
7	Morena & Milton	B	10	A	8	B	10	B	11
8	Morena & Ashton	A	<10	A	7	A	<10	B	10
9	Morena & West Morena *(north split)*	B	11	B	11	B	12	B	13
10	Knoxville & East Morena	C	22	B	12	D	36	B	12
11	Morena & Tecolote	C	30	C	33	D	38	D	48
12	Morena & Savannah (side-street stop-sign)	C (1)	19	E (1)(2)	38	C (1)(2)	19	E (1)(2)	38
13	East Morena & Buenos	B	14	B	13	B	14	B	12
14	West Morena & Morena *(south split)*	A	<10	B	15				
15	*East Morena & Linda Vista (proposed intersection)*					C	31	C	23
16	West Morena & Vega / Driveway	A	<10	A	10	A	<10	B	12
17	West Morena & Buenos	B	13	B	13	B	14	B	19
18	West Morena & Sherman	D	46	D	51	B	17	B	14
19	West Morena & Linda Vista	B	13	B	20	B	17	D	43
20	Napa & Linda Vista	D	51	**E**	**78**	D	54	C	21
21	Marian Wy & Linda Vista	D	36	B	18	D	45	B	19
22	Napa & Riley	B	15	B	14	B	14	B	14
23	Napa & Friars	B	19	B	14	C	20	C	21
24	Colusa & Friars	B	11	B	12	D	51	D	53

Bold indicates failing LOS of E or F based on City of San Diego criteria (excludes stop-controlled locations where signal warrants not met).

Notes:

1. Indicates stop-controlled intersection. (Average delay based on stop-controlled approaches only).
2. Side-street approach volume on Savannah does not trigger peak-hour signal warrant.

Table 6-8: Recommended Circulation Plan (Long-term) – Peak Hour Level of Service Comparison

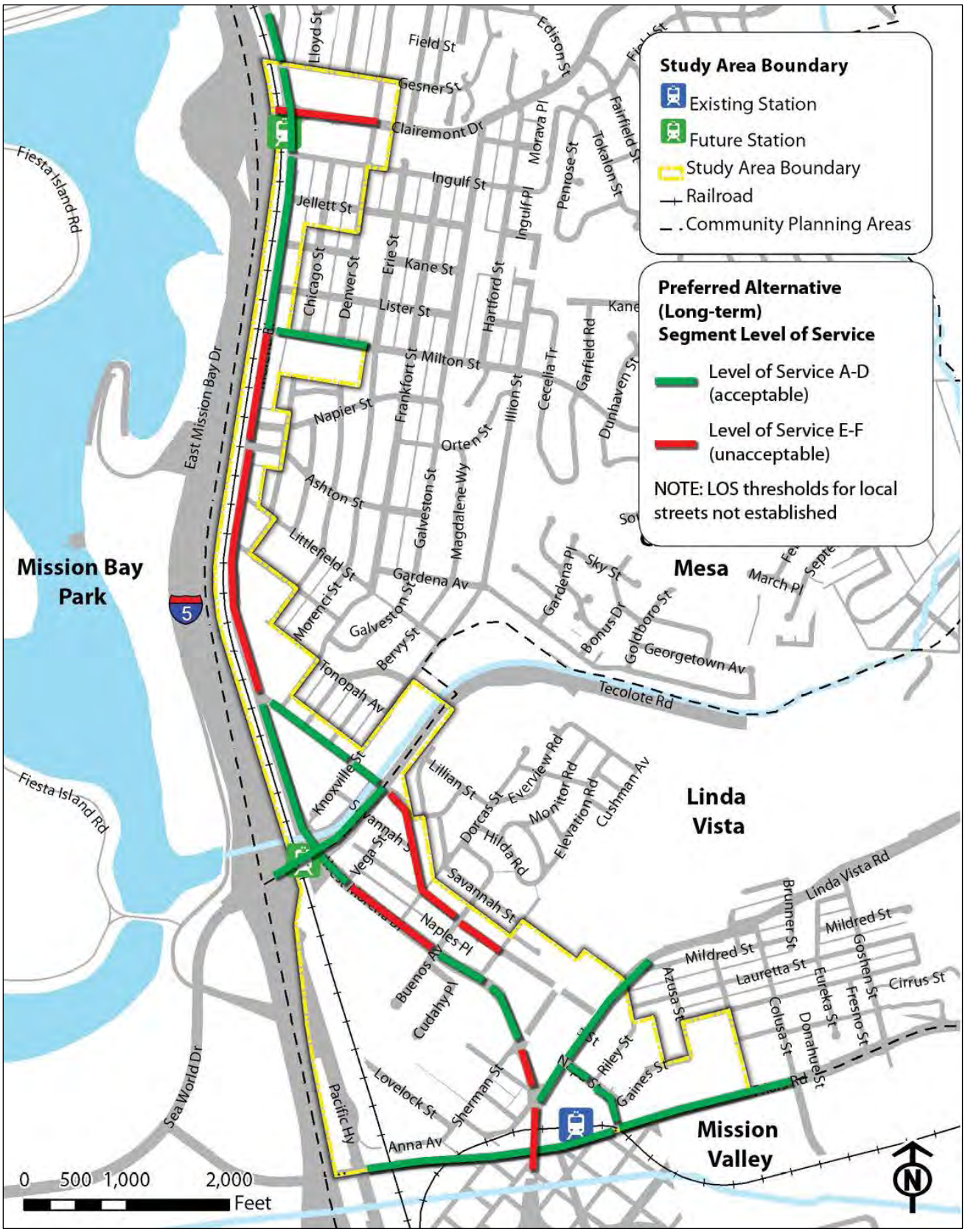


Figure 67: Long-term Segment LOS

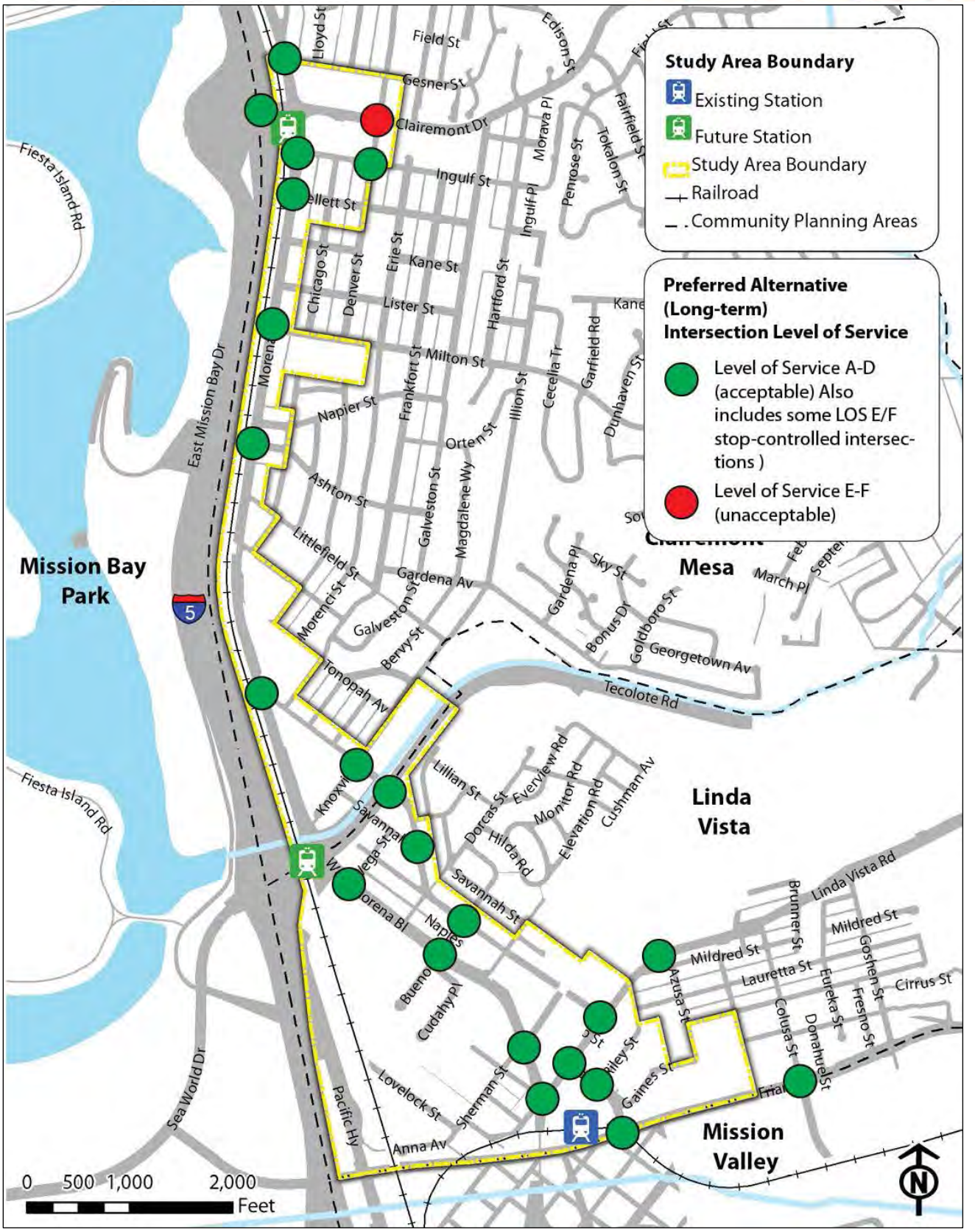


Figure 68: Long-term Intersection LOS

6.6 Pedestrian Mobility Analysis

The existing pedestrian environment consists primarily of sidewalks, standard marked crosswalks, curb ramps, and occasionally a planting strip separating the sidewalk from the adjacent travel lane.

Sidewalks are present throughout most of the study area, especially along commercial land uses south of Tecolote Road (see Figure 5-9 in the Existing Conditions Report). These sidewalks vary in size and condition, with some areas missing sidewalks altogether. Sidewalks are typically four to six feet wide and are immediately adjacent to the street. Small segments of West Morena Boulevard, Linda Vista Road and Napa Street have planting strips on the inside of sidewalks against commercial parking. In the residential areas, sidewalks generally do not exist.

Double bar marked crosswalks are present throughout the study area where crossing is allowed. At some four-way intersections, only two or three out of the four legs are permissible for pedestrian crossings.

Pedestrian collision data was collected between 2006 and 2010 and a total of 12 collisions were reported (see Figure 5-19 in the Existing Conditions Report). All 12 collisions involved injuries with no fatalities reported. The one location with multiple vehicular-pedestrian collisions (2) was at Morena Boulevard and Napa Street. One collision involved the pedestrian crossing Morena Boulevard outside of the crosswalk. Marked crosswalks exist on the east, west and southern legs of the intersection with crossing prohibited on the northern leg.

For these 12 collisions, there is an equal split between the motorist and pedestrian violations with each violating each other's right-of-way six times. Pedestrians who violated the vehicular right-of-way were not using the crosswalk or were walking in the road right-of-way. This initially indicates that block lengths are too long, intersections are spaced too far apart discouraging their use, and the lack of sidewalks may be responsible for those hit while walking along the street. Motorists violating pedestrian right-of-ways occurred in crosswalks, along the road and, in some cases, on the sidewalk. The incidents on the sidewalk occurred from vehicles getting in and out of parking spaces. This indicates there was not enough separation between parked cars and the sidewalk or the extra wide driveway aprons do not function well as walkways.

The geometry of several intersections skew the angles of the motorists who are making turning movements through the intersection. These skewed intersections may also allow a faster right turning movement, such as turning right onto Morena Boulevard from Napa Street. It also increases the length pedestrians have to cross, as well as increasing the phasing required to allow them to across the street. Vehicles sometimes block the crosswalk while encroaching into the intersection trying to get a better angle to see oncoming traffic. This causes motorists to either block the crosswalk or not see pedestrians altogether. The study area has numerous skewed intersections including:

- Morena Boulevard at Napa Street
- Napa Street at Linda Vista Street
- Morena Boulevard at Linda Vista Street
- Morena Place at Morena Boulevard

- Morena Boulevard at Naples Street /Dorcas Street
- Morena Boulevard at West Morena Blvd
- Morena Boulevard at Asher Street
- Morena Boulevard at Littlefield Street

Pedestrian volumes were conducted as part of this study with the highest volume recorded on Napa Street and Linda Vista Road, having over 200 pedestrian during the peak hours (see Figure 5-10 in the Existing Conditions Report). These volumes coincide with use of the Morena/Linda Vista Transit Station.
Other high pedestrian volume intersections include:

- Morena Boulevard and Napa Street
- Napa Street and Riley Street
- Napa Street and Friars Road

6.6.1 General Recommendations for Pedestrians

A few of the major deficiencies or issues identified by the public were:

- Lack of sidewalks
- Inadequacy of sidewalks
- Configuration of the intersections
- Safe routes to transit
- Traffic calming
- Streetscape improvements
- Better multi-modal access
- Better connection to Mission Bay and USD

To improve walkability within the study area and to destinations such as existing and future transit stations, the pedestrian environment could be improved with:

- Wider sidewalks
- Connected sidewalks
- High visibility crosswalks (ladder or continental)
- ADA compliant curb ramps
- Separation between sidewalk and adjacent travel lane (planting strips)
- Traffic calming (narrow lanes, curb extensions, etc)
- Shorter crossing distances at crosswalks

6.6.2 Mid-Term Recommendations for Pedestrians

The mid-term recommendations primarily focus on the study area south of Tecolote Road. Recommendations throughout include:

- Wider sidewalks
- Connecting sidewalk gaps in the commercial areas
- Separation between sidewalks and adjacent travel lanes with planting strips
- Curb extensions
- Median refuge islands
- High visibility continental crosswalks

These improvements, in the interim, will provide a level of comfort much greater than the existing environment. To address the pedestrian collision analysis and public comments, the recommendations emphasize high visibility crosswalks, curb extensions, and physical separation from adjacent travel lanes. The wider sidewalks and planting strips will alleviate the proximity of parked vehicles and provide additional separation from the travel lane. The high visibility crosswalks and curb extensions will provide greater visibility for

both pedestrians and motorists at intersections. The connected sidewalks will provide improved routes to transit, Tecolote Road and Clairemont Drive to access Mission Bay. The sidewalk improvements will provide an enhanced pedestrian environment between USD and the Morena/Linda Vista Transit Station.

Intersections have also been reconfigured to provide a shorter crossing distance with median refuges where needed. These reconfigurations also provide better access and visibility to the different land uses in the area. Intersections that have been recommended for a geometric change are:

- Morena Boulevard at Linda Vista Road
- Morena Boulevard at Napa Street
- West Morena Boulevard at Cushman Avenue

Improvements north of Tecolote Road to Clairemont Drive are planned for both the mid-term and the long-term scenario. These improvements include:

- Additional access to the future Tecolote Transit Station from Tecolote Road
- Class 1 multi-use path from Knoxville Street to Ingulf Street (between future Tecolote and Clairemont Transit Stations)
- Pedestrian plaza at Morena Boulevard and Ingulf Street

These improvements provide better access to the future transit stations from adjoining streets and between each station. The two-way multi-use path closes a gap for pedestrians and bicyclists between two future transit stations on the west side of Morena Boulevard. Multi-use paths are popular for all non-motorized users because it separates them from interacting with vehicles at driveways and provides separation from travel lanes. They provide low-stress connectivity for all ages between destinations.

6.6.3 Long-Term Recommendations for Pedestrians

In the long-term scenario, major improvements and intersection reconfigurations are designed to improve vehicular traffic flow and pedestrian walkability. Additional benefits include access to commercial land uses, as well as existing and proposed transit stations. These reconfigurations shorten crossing distances by angling the intersections at 90-degrees and including curb extensions. They also increase pedestrian and vehicular visibility, provide median refuges and high visibility crosswalks. Other recommendations are similar to the mid-term scenario by utilizing the same treatments when applicable.

Intersections that have been reconfigured from skewed angles to right angles are:

- Morena Boulevard at Napa Street
- Napa Street and Linda Vista Street
- Morena Boulevard at Linda Vista Street
- Cushman Avenue at Savannah Street
- West Morena Boulevard at Cushman Avenue
- Knoxville Street at West Morena Boulevard

The long-term scenario addresses sidewalk gap closures at:

- Morena Boulevard south of Napa Street
- West Morena Boulevard between Vega Street and Knoxville Street
- Savannah Street
- Morena Boulevard between Naples Place and West Morena Boulevard
- Morena Boulevard between Ingulf Street and Genser Street (new Clairemont Transit Station)

6.6.4 Walktime Analysis

Improving the pedestrian environment provides better non-motorized access to transit stations, retail, schools and parks. Many people are reluctant to walk to destinations nearby because of both criminal and vehicular safety issues. By increasing the walkability, connectivity, and accessibility between destinations and origins, people are more likely to walk than drive to their destinations.

One way to identify changes in pedestrian accessibility is to measure walk times for both existing and proposed conditions (see Figure 5-17 and 5-18 in the Existing Conditions Report). A walk time analysis identifies the population within a given walking distance to proposed land uses using both the existing and future pedestrian facility network. The table below depicts the number of dwelling units (assumed in the preferred land use scenario) within a 5, 10, and 15 minute walk time of the transit stations.

Table 6-9: Dwelling Units inside Existing and Proposed Walk Times

Walk Time (Minutes)	Existing Facilities	Improved Facilities	Percent Increase in Dwelling Units
0 -5	691	1,486	115%
5-10	1,888	2,500	32%
10-15	2,056	1,404	(-32%)
Total	4,635	5,390	16%

Table 6-9 highlights the significant increase in dwelling units within a shorter walk time with improved pedestrian facilities. The analysis indicates that when improved pedestrian facilities are constructed, accessibility will increase such that an additional 1,407 units will fall within a 10-minute walk time from the transit stations. The decrease in dwelling units falling within the 10-15 minute walk time reflects the shift of dwelling units from a 10-15 minute walk time to that of a 10 minute or less walk time. Furthermore, the analysis suggests that improved pedestrian facilities will capture an additional 755 dwelling units, which would otherwise fall outside of a 15-minute walk time.

6.6.5 Expected Changes in Pedestrian Levels of Activity

The expected benefit resulting from proposed pedestrian improvements would be an increase in pedestrian activity. This will result from improved safety and connectivity to transit and local retail destinations. With the proximity of Fiesta Island, USD and Mission Bay Park, recreational activities such as running, skating, speed walking and stroller use could also see an increase resulting from better accessibility to these destinations.

Shorter pedestrian crossing distances at intersections may help to alleviate any delay at signalized and unsignalized intersections alike. Shorter distances equate to less phase time needing to be dedicated to clear all pedestrians. Increased pedestrian activity and throughput in the study area could be an added benefit to the local businesses in terms of customers and transit use both to existing and future LRT stations. The proposed changes in land use, the mixture of these uses, and the changes in the physical layout of roads and walkways will all serve to increase the mode share of walking in the area. This is especially true of any expansion of USD facilities, particularly if these facilities contain a mixture of housing, services, retail and food options. Social interaction and street activation could go up dramatically if site design and circulation systems are handled appropriately.

6.7 Bicycle Mobility Analysis

Bicycles are an integral part of the multi-modal network and facilities must be designed to be safe and efficient. Throughout the study area, there is a patchwork of Class 2 bike lanes, Class 3 bike routes and one Class 1 bike path just outside the study boundary on Friars Road. Two continuous bike lanes are on Linda Vista Road from Morena Boulevard to USD and on Pacific Highway from Old Town to Fiesta Island. However, the latter is not easily accessible from Morena Boulevard due to the lack of on-street connections. Additional bicycle facilities are proposed in the City's Bicycle Master Plan, which includes closing gaps in the Class 2 network and upgrading Class 3 bike routes to Class 2 bike lanes. A Class 1 bike path is proposed along the rail line just west of Morena Boulevard.

Bicycle collisions data collected between 2006 and 2010 identified 16 collisions (see Figure 5-20 in the Existing Conditions Report). All collisions resulted in injury to the cyclist with no fatalities reported. Twelve of the 16 collisions were the cyclists' fault, with two being the motorists at fault and two unknown. The three most common causes of the bicycle collisions were violating the vehicle's right-of-way, riding on the wrong side of the street, and improper turning. The motorists' violation was driving at an unsafe speed.

The street that has experienced the most bicycle collisions is Linda Vista Road, with seven collisions. This also happens to be where bicycle facilities exist and the only bicycle connection between USD and the Morena/Linda Vista Transit Station. Clairemont Drive has the second highest with three collisions, two resulting from vehicular speeding and the other an unknown cause.

Similar to the pedestrian environment, the geometry of the intersections plays an integral role in the visibility and safety for both cyclists and motorists. When crossing skewed intersections, cyclists also have a longer crossing distance and are sometimes not seen when travelling through an intersection or turning right. Some less experienced cyclists also use the crosswalks and interface with pedestrians through intersections. The skewed intersections within the study area are identified in the pedestrian mobility section.

Peak hour bicycle counts conducted showed a steady volume of cyclists throughout the study area. Higher bicycle volumes are found in the "triangle" intersections of Morena Boulevard, Linda Vista Road and Napa Street, indicating use of Morena/Linda Vista Transit Station (see Figure 5-13 in the Existing Conditions Report).

A steady volume is found between Friars Road, and Morena Boulevard to Clairemont Drive. Since the counts were conducted on peak weekday periods, the steady volume could also be attributed to bicycle commuting patterns. Residential land uses north of Tecolote Road are sources of origin to destinations like USD and Old Town. It's likely that the same bicycle commuters were recorded at many of the counting locations in the study area during the count period.

The high volume counts were located in the same intersection as the high pedestrian volumes. These include:

- Morena Boulevard and Napa Street
- Napa Street and Linda Vista Road
- Napa Street and Friars Road
- Linda Vista Road and Morena Boulevard

6.7.1 General Bike Facility Recommendations

A few of the major issues identified through the public outreach process were:

- Additional separation from vehicular traffic
- Safety improvements
- Connections to USD and Mission Bay
- Buffered bike lanes
- Separated facilities
- Safe routes to transit
- Close gaps

To improve the bicycling environment and increase ridership throughout the area, the following treatments can be applied:

- Buffered bike lanes (from moving vehicles and/or parked vehicles)
- Colored transition lanes
- Separated facilities (Class 1 bike paths or cycle tracks)
- Properly designed intersections
- Traffic calming
- Reducing vehicular lane widths
- Wider bike lanes
- Shared lane markings with appropriate signage

6.7.2 Mid-Term Recommendations for Cyclists

Recommendations in the mid-term period for areas south of Tecolote Road include:

- Bicycle only “jug handle” crossing
- Colored transition lanes
- Bike lanes on all the streets
- Median refuges
- Buffered bike lanes from vehicular traffic
- Buffered bike lanes from parked cars
- Lane width reduction

Reconfigured intersections provide a shorter crossing distance and lane markings leading to the intersections can provide proper placement cues for cyclists. Intersections that have been recommended for a geometric change are:

- Morena Boulevard at Linda Vista Road
- Morena Boulevard at Napa Street
- West Morena Boulevard at Cushman Avenue

The recommended mid-term reconfiguration at Morena Boulevard and Linda Vista Road incorporates a “jug handle” treatment, which allows the cyclists to queue like a pedestrian to cross at the crosswalk. Cyclists have the option to continue to Linda Vista Road, continue on Morena and merge across the lane with other motor vehicles or use the jug handle facility to continue onto Morena Boulevard. The skewed nature of this intersection makes it difficult for all but the most experienced cyclists to safely continue onto Morena Boulevard due to the free right turning movement of vehicles onto Linda Vista Road. This jug handle treatment provides a controlled crossing so cyclists and pedestrians can cross five lanes of traffic. A median refuge is also recommended.

Additional recommendations that address the results of the collision analysis and public comments include:

- Closing bike facility gaps with standard and buffered bike lanes
- Shorter crossing distances at intersections
- Enhanced bike facilities
- Connections to USD and Morena/Linda Vista Transit Station
- Traffic calming

Improvements north of Tecolote Road to Clairemont Drive are planned during the mid-term and will not change for the long-term. These improvements include:

- Class 1 multi-use path from Knoxville Street to Ingulf Street (between future Tecolote and Clairemont transit stations)
- Buffered bike lanes from parked vehicles (Morena Boulevard northbound lanes)
- Buffered bike lanes from moving vehicles (Morena Boulevard southbound lanes)
- Colored transition lanes

These improvements provide bicycle access to the future transit stations between Clairemont Drive and Tecolote Road, as well as the rest of the study area. Both the multi-use path and buffered bike lanes add bicycle connections to Mission Bay from Tecolote Road and Clairemont Drive. The two-way multi-use path provides a low-stress facility for cyclists of all ages and skill levels and will appeal to less experienced cyclists. Multi-use paths are popular for all non-motorized users because it separates them from interacting with vehicles at driveways and provides separation from travel lanes. The buffered bike lanes will likely be used by bike commuters and faster recreational cyclists. Faster and more experienced cyclists will likely feel more comfortable in the buffered bike lanes than the multi-use path. The bike lanes provide a facility for cyclists wanting to avoid conflicts with pedestrians on the multi-use path.

Colored transition lanes are also being recommended in “conflict zones” where motorists and cyclists have to share the road or interact in tight spaces. This primarily occurs at right-turn-only pockets where cyclists are travelling straight and motorists are turning right. The colored transition lanes, typically green, highlight the area where each user must heed additional caution when travelling through this zone.

6.7.3 Long-Term Recommendations for Cyclists

Similar to the long-term pedestrian improvements, the reconfigurations of the road alignments have the biggest impact for improving cycling in the area. The reconfigured geometries of the long-term recommendations allow the accommodations of:

- Standard and buffered bike lanes
- High visibility crosswalks
- Coordinated signal timing with vehicular traffic
- Proper placement of cyclist within the travel lane
- Removal of free right-turning movements
- Lane width reductions
- Advisory bike lanes in right-turn pockets

A few issues that these improvements address are:

- Gap closure along Morena Boulevard and West Morena Boulevard between Friars Road and Clairemont Drive
- New access onto Marian Way to USD
- Traffic calming

6.7.4 Expected Changes in Cycling Levels of Activity

The inherent benefit of improved facilities in the study area would be in an increase in cyclists accessing community destinations and transit stations. There would be an increase in bicycle mode share with bike commuting due to dedicated facilities and gap closures. Individuals that are currently concerned about cycling through the area because of the high speed traffic and lack of buffering would likely be encouraged to ride once they see the buffering and the separated Class 1 facility. These will be highly visible and will serve as a reminder or invitation to come out and ride. The connectivity of the Class 1 facilities to the new bridge crossings and to Mission Bay will result in increased recreational rides by those who live in the community. Anytime a loop system is provided, the resulting increase in use is more dramatic than the same mileage of new facilities that are arranged as an out and back facility. It should also be noted that this route may in fact be a better and safer route than the proposed Coastal Rail Trail, located on the west side of the freeway. The final configuration of this segment of the Coastal Rail Trail has not been determined. However, the original plan located the route along Morena Boulevard. Problems with connections between the Rose Creek Canyon / Sante Fe Street segment of the trail and Morena Boulevard make this difficult. However, a small connector at Balboa Avenue could connect the east and west side of the freeway with a bike facility tied into the Balboa station and then connect with Class 2 lanes to the Clairemont and Tecolote stations.

There is potential for increases in transit use with the addition of a multi-use path between the future transit stations and overall connections to the community and USD. Several levels of bike facilities will be provided, including protected multi-use paths, buffered bike lanes and standard lanes. In addition, improvements to intersections and crossing points should all serve to increase bike movements between the transit stations, destinations / origins in the community, and major attractions such as USD and Mission Bay.

Reduced vehicular speed is likely to result from these changes, which will directly benefit cyclists using the area. The reduction in speed would be related to lane width reductions, shorter block lengths, increased on-street parking and removal of high-speed free right-turning movements. The reconfiguration of Napa Street, and the extension of Savannah Street and Knoxville Street will provide greater access to new land uses and remove some vehicular traffic from Morena Boulevard and West Morena Boulevard. Although the overall development pattern will result in new trip generation, the shift from regional retail to local mixed-use land uses should result in trip reductions. Mode shifts to walking and biking are only possible when safe, connected and comfortable facilities are in place for the new residents and visitors in the area to take place. If the concept of mobility hubs are put into place around each of the three transit stations, the adoption of transit use, coupled with walking, biking, bike share and car share options, could result in a dramatic increase in trips by bike, transit or walking and a decrease in trips that are vehicular based. This will be especially true for USD if they expand their campus towards the study area. Significant amounts of student housing with local support services could be very successful in the area. These land use changes, along with the adoption of bike share programs and car share programs, could result in a significant number of students that live, work, learn, shop, eat and socialize, all within the local economy. These changes also make it likely that a student could self-select to be in this location without the need for a vehicle. All of these factors could spell success for the economy of the area while at the same time limit the negative affects of increased congestion and incomplete streets.

Alternative Concepts: "Conservative Land Use"

NORTH 1"= 600' **Figure 1**

Section 1

Segment 1

Segment 2

Segment 3

Segment 4

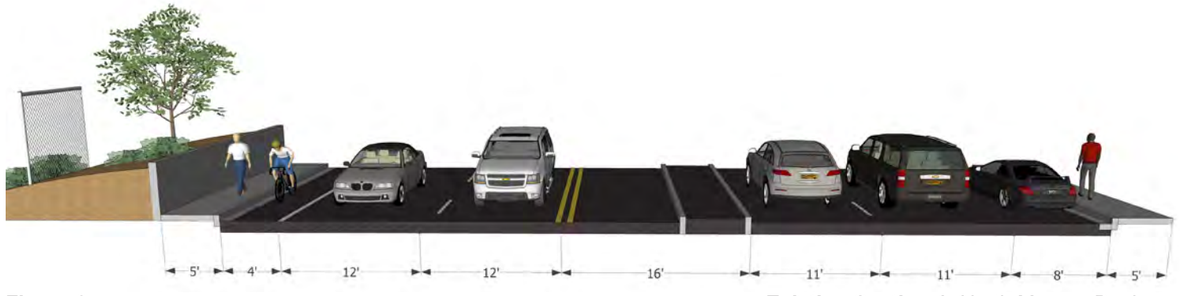


Figure 2 **Existing Section 1:** North Morena Boulevard

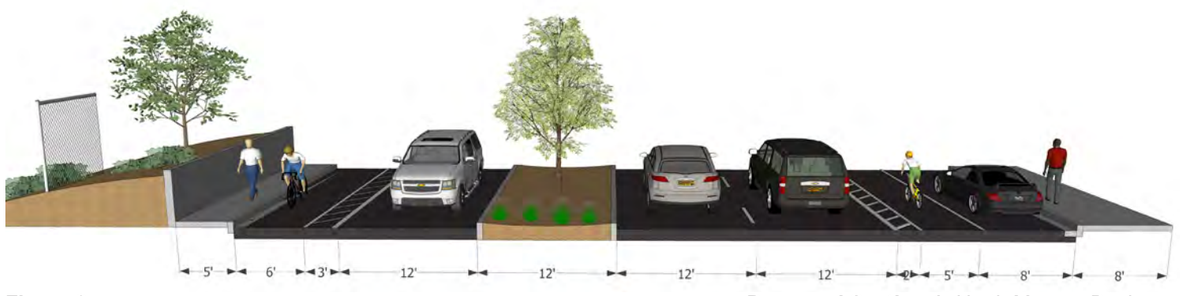


Figure 3 **Proposed Section 1:** North Morena Boulevard

“Conservative Land Use”: Segment 1

NORTH 1”= 200’ **Figure 4**

Morena Blvd Station Area Planning Study

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

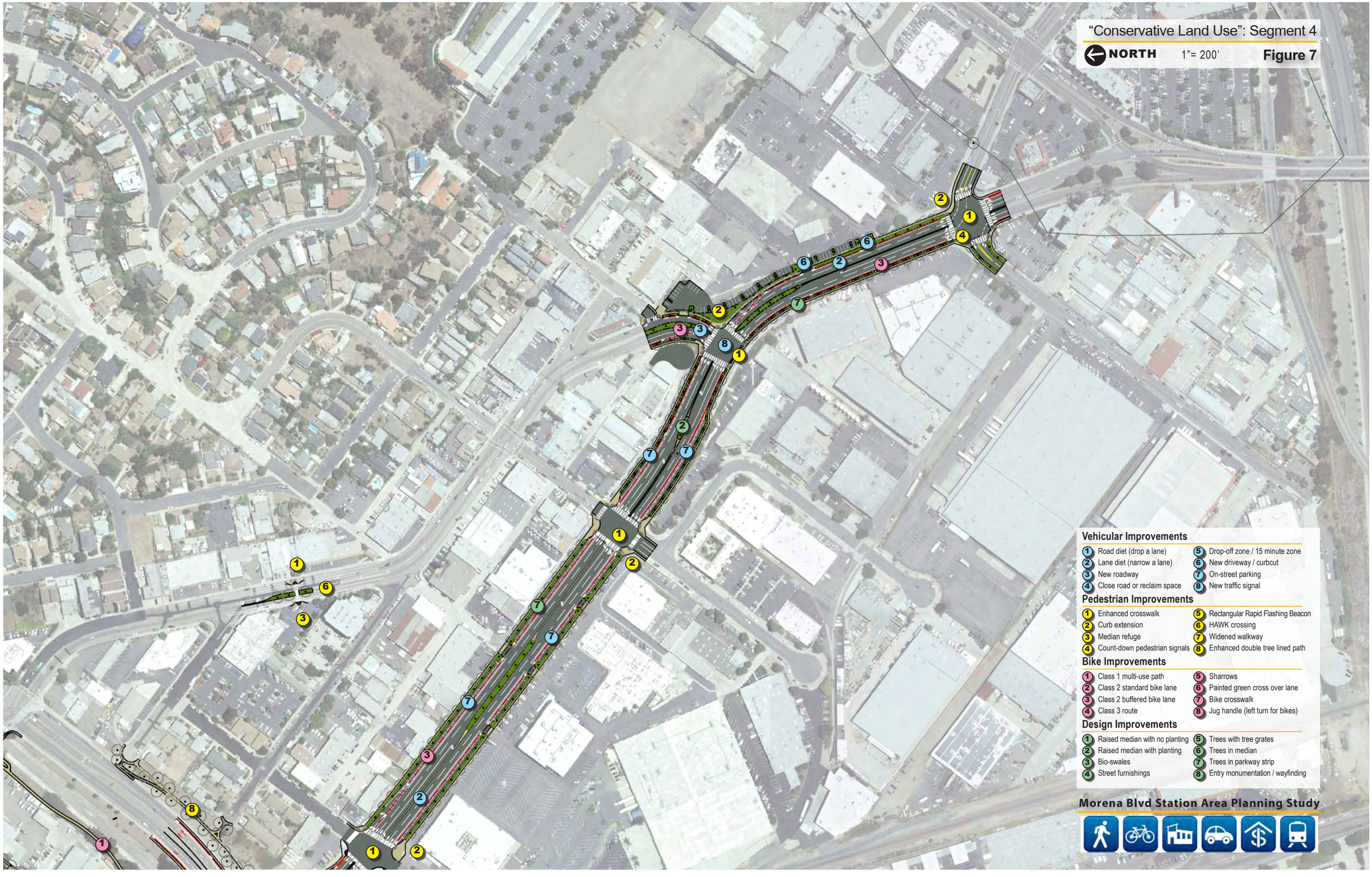
1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

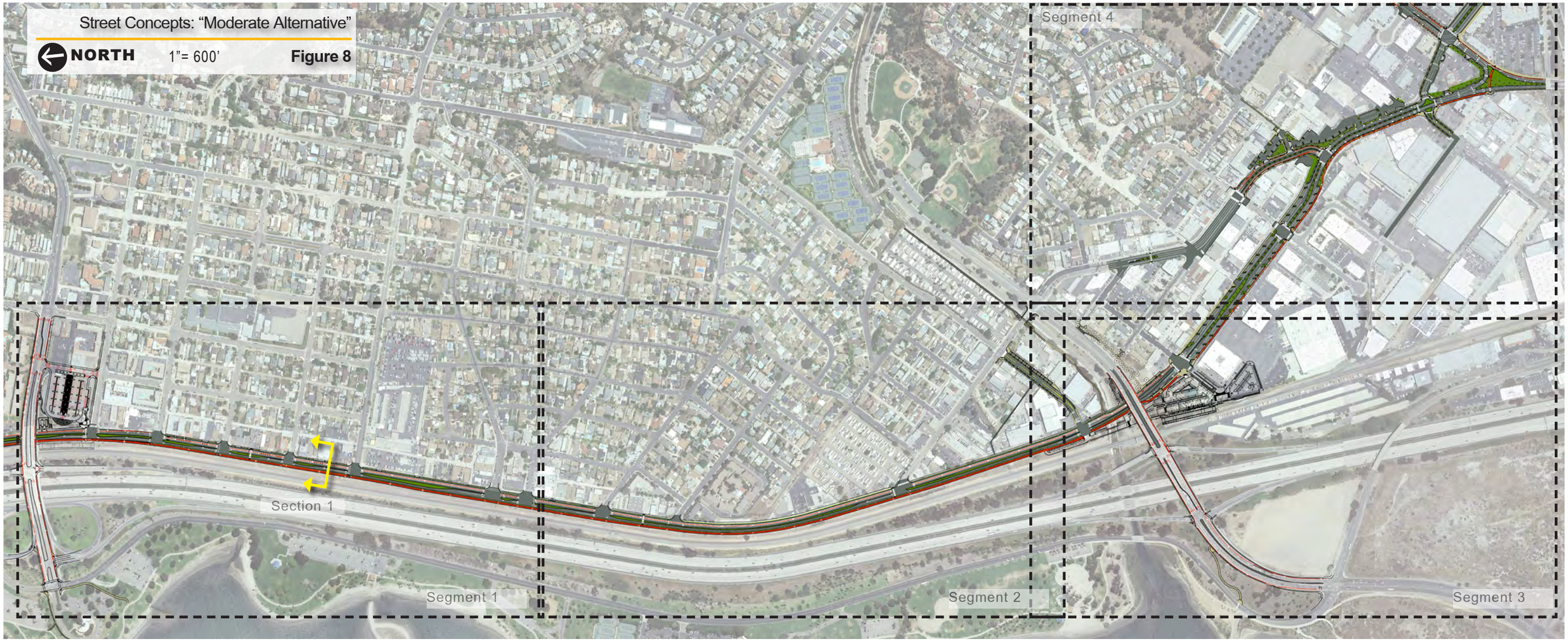

"Conservative Land Use": Segment 2
NORTH
1"= 200'
Figure 5
Morena Blvd Station Area Planning Study
Undercrossing
Vehicular Improvements
1 Road diet (drop a lane)
2 Lane diet (narrow a lane)
3 New roadway
4 Close road or reclaim space
5 Drop-off zone / 15 minute zone
6 New driveway / curbcut
7 On-street parking
8 New traffic signal
Pedestrian Improvements
1 Enhanced crosswalk
2 Curb extension
3 Median refuge
4 Count-down pedestrian signals
5 Rectangular Rapid Flashing Beacon
6 HAWK crossing
7 Widened walkway
8 Enhanced double tree lined path
Bike Improvements
1 Class 1 multi-use path
2 Class 2 standard bike lane
3 Class 2 buffered bike lane
4 Class 3 route
5 Sharrows
6 Painted green cross over lane
7 Bike crosswalk
8 Jug handle (left turn for bikes)
Design Improvements
1 Raised median with no planting
2 Raised median with planting
3 Bio-swales
4 Street furnishings
5 Trees with tree grates
6 Trees in median
7 Trees in parkway strip
8 Entry monumentation / wayfinding


"Conservative Land Use": Segment 3
NORTH
1"= 200'
Figure 6
Vehicular Improvements
1 Road diet (drop a lane)
2 Lane diet (narrow a lane)
3 New roadway
4 Close road or reclaim space
5 Drop-off zone / 15 minute zone
6 New driveway / curbcut
7 On-street parking
8 New traffic signal
Pedestrian Improvements
1 Enhanced crosswalk
2 Curb extension
3 Median refuge
4 Count-down pedestrian signals
5 Rectangular Rapid Flashing Beacon
6 HAWK crossing
7 Widened walkway
8 Enhanced double tree lined path
Bike Improvements
1 Class 1 multi-use path
2 Class 2 standard bike lane
3 Class 2 buffered bike lane
4 Class 3 route
5 Sharrows
6 Painted green cross over lane
7 Bike crosswalk
8 Jug handle (left turn for bikes)
Design Improvements
1 Raised median with no planting
2 Raised median with planting
3 Bio-swales
4 Street furnishings
5 Trees with tree grates
6 Trees in median
7 Trees in parkway strip
8 Entry monumentation / wayfinding
Morena Blvd Station Area Planning Study


"Conservative Land Use": Segment 4
NORTH
1"= 200'
Figure 7
Vehicular Improvements
1 Road diet (drop a lane)
2 Lane diet (narrow a lane)
3 New roadway
4 Close road or reclaim space
5 Drop-off zone / 15 minute zone
6 New driveway / curbcut
7 On-street parking
8 New traffic signal
Pedestrian Improvements
1 Enhanced crosswalk
2 Curb extension
3 Median refuge
4 Count-down pedestrian signals
5 Rectangular Rapid Flashing Beacon
6 HAWK crossing
7 Widened walkway
8 Enhanced double tree lined path
Bike Improvements
1 Class 1 multi-use path
2 Class 2 standard bike lane
3 Class 2 buffered bike lane
4 Class 3 route
5 Sharrows
6 Painted green cross over lane
7 Bike crosswalk
8 Jug handle (left turn for bikes)
Design Improvements
1 Raised median with no planting
2 Raised median with planting
3 Bio-swales
4 Street furnishings
5 Trees with tree grates
6 Trees in median
7 Trees in parkway strip
8 Entry monumentation / wayfinding
Morena Blvd Station Area Planning Study

Street Concepts: "Moderate Alternative"

NORTH 1"= 600' **Figure 8**



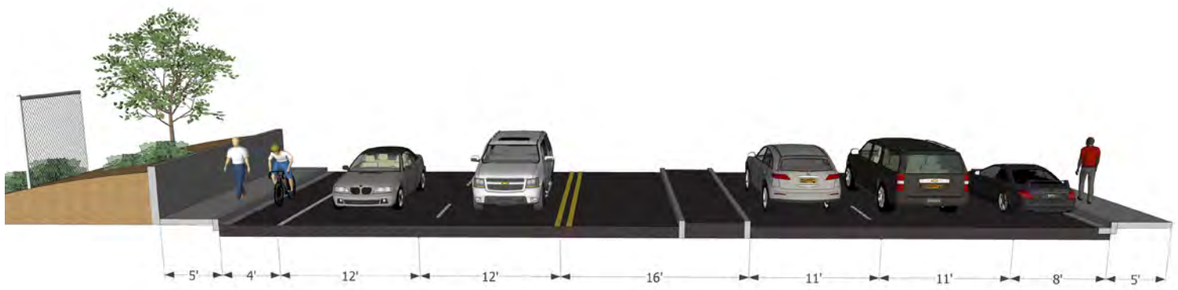


Figure 9 **Existing Section 1:** North Morena Boulevard

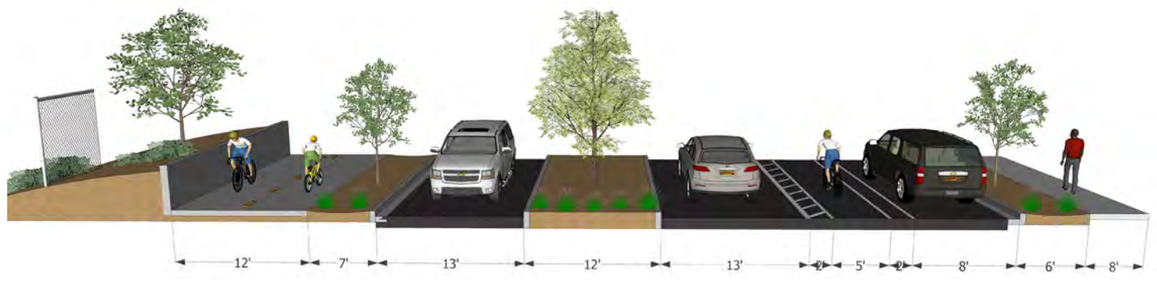
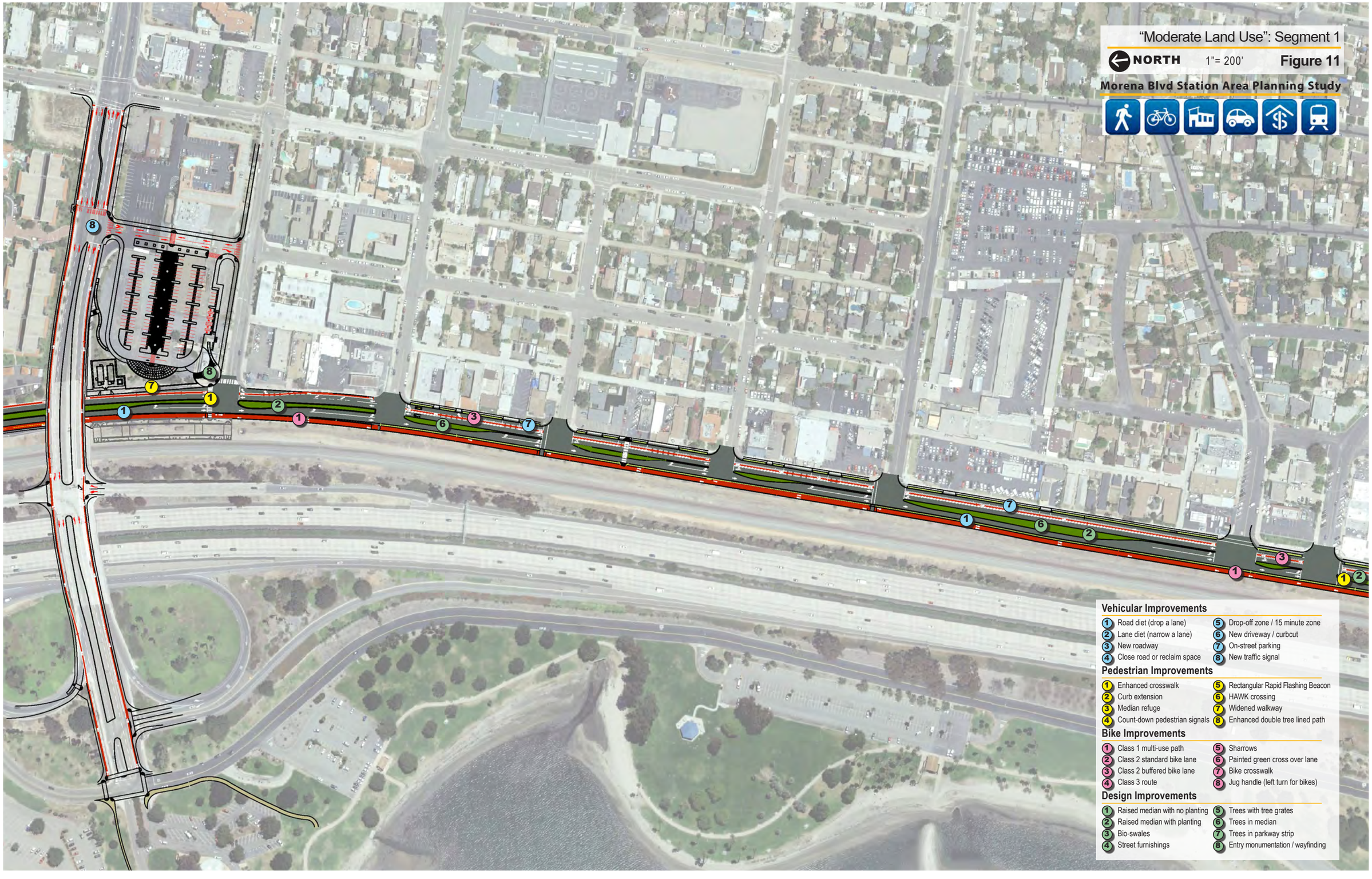


Figure 10 **Proposed Section 1:** North Morena Boulevard


"Moderate Land Use": Segment 1
NORTH
1"= 200'
Figure 11
Morena Blvd Station Area Planning Study
Vehicular Improvements
1 Road diet (drop a lane)
2 Lane diet (narrow a lane)
3 New roadway
4 Close road or reclaim space
5 Drop-off zone / 15 minute zone
6 New driveway / curbcut
7 On-street parking
8 New traffic signal
Pedestrian Improvements
1 Enhanced crosswalk
2 Curb extension
3 Median refuge
4 Count-down pedestrian signals
5 Rectangular Rapid Flashing Beacon
6 HAWK crossing
7 Widened walkway
8 Enhanced double tree lined path
Bike Improvements
1 Class 1 multi-use path
2 Class 2 standard bike lane
3 Class 2 buffered bike lane
4 Class 3 route
5 Sharrows
6 Painted green cross over lane
7 Bike crosswalk
8 Jug handle (left turn for bikes)
Design Improvements
1 Raised median with no planting
2 Raised median with planting
3 Bio-swales
4 Street furnishings
5 Trees with tree grates
6 Trees in median
7 Trees in parkway strip
8 Entry monumentation / wayfinding

“Moderate Land Use”: Segment 2

NORTH 1”= 200’ **Figure 12**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

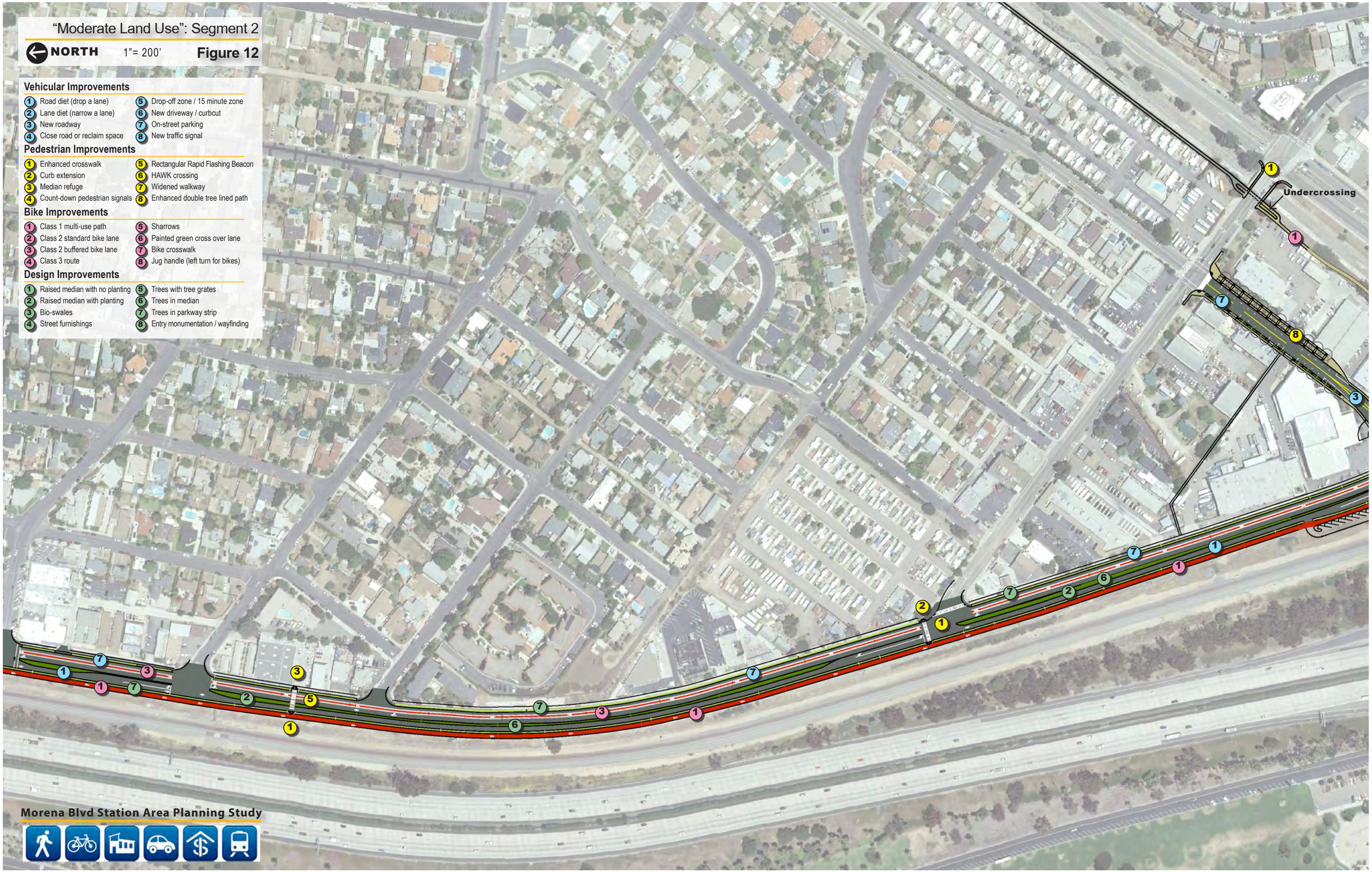
1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

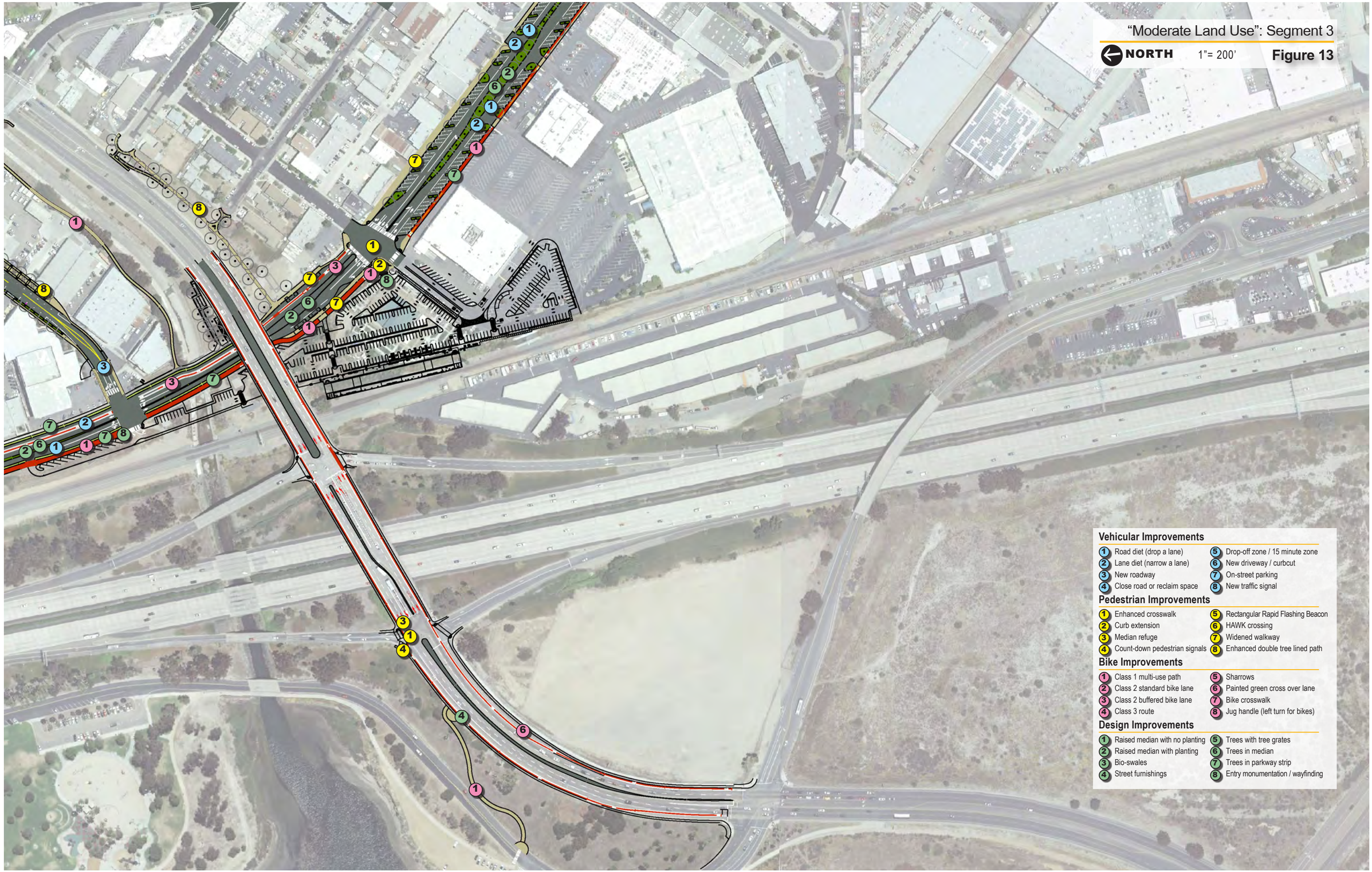
1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding



Morena Blvd Station Area Planning Study


"Moderate Land Use": Segment 3
NORTH
1"= 200'
Figure 13
Vehicular Improvements
1 Road diet (drop a lane)
2 Lane diet (narrow a lane)
3 New roadway
4 Close road or reclaim space
5 Drop-off zone / 15 minute zone
6 New driveway / curbcut
7 On-street parking
8 New traffic signal
Pedestrian Improvements
1 Enhanced crosswalk
2 Curb extension
3 Median refuge
4 Count-down pedestrian signals
5 Rectangular Rapid Flashing Beacon
6 HAWK crossing
7 Widened walkway
8 Enhanced double tree lined path
Bike Improvements
1 Class 1 multi-use path
2 Class 2 standard bike lane
3 Class 2 buffered bike lane
4 Class 3 route
5 Sharrows
6 Painted green cross over lane
7 Bike crosswalk
8 Jug handle (left turn for bikes)
Design Improvements
1 Raised median with no planting
2 Raised median with planting
3 Bio-swales
4 Street furnishings
5 Trees with tree grates
6 Trees in median
7 Trees in parkway strip
8 Entry monumentation / wayfinding

“Moderate Land Use”: Segment 4

NORTH 1”= 200’ **Figure 14**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

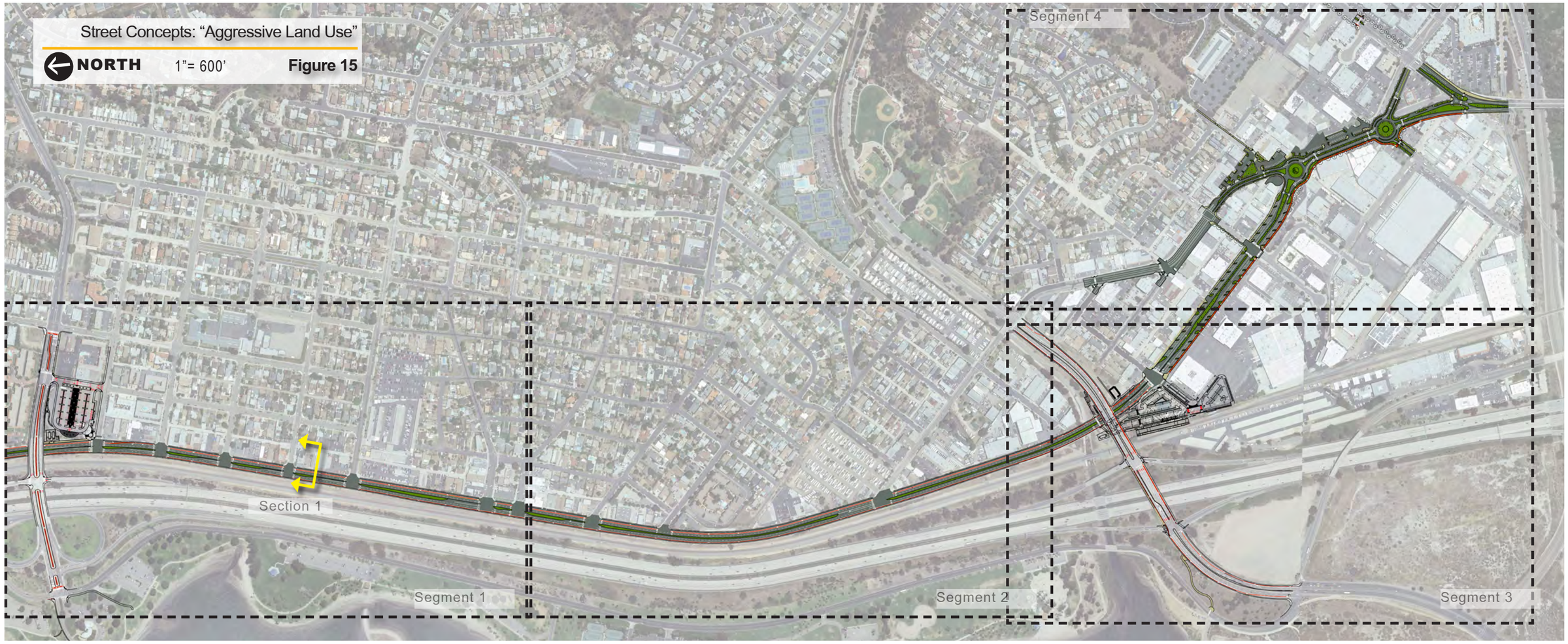
1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Street Concepts: "Aggressive Land Use"

NORTH 1"= 600' **Figure 15**



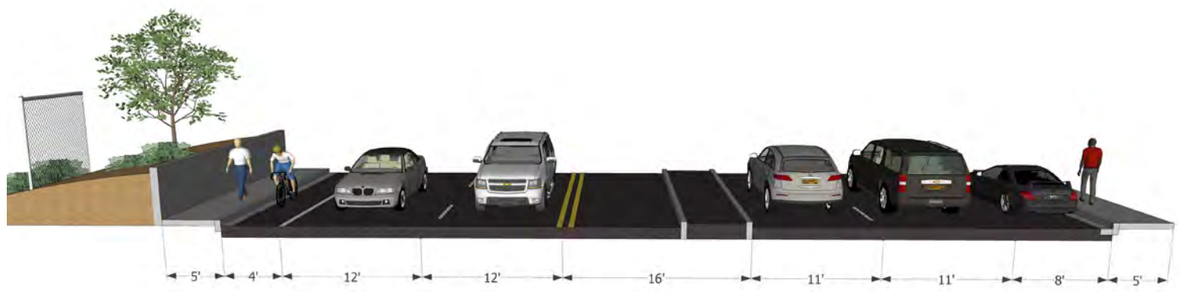


Figure 16 **Existing Section 1:** North Morena Boulevard

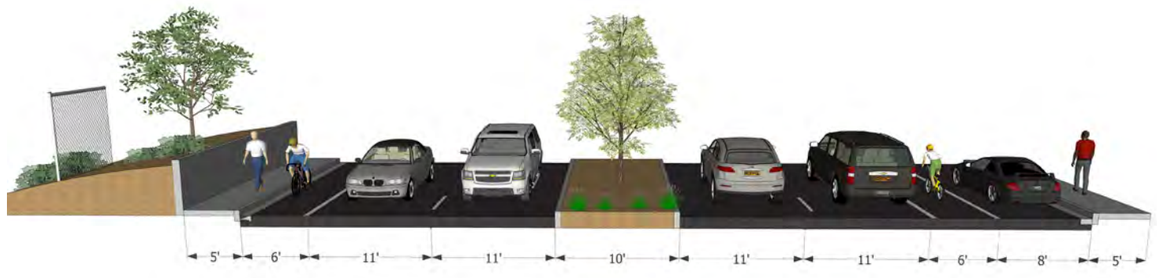
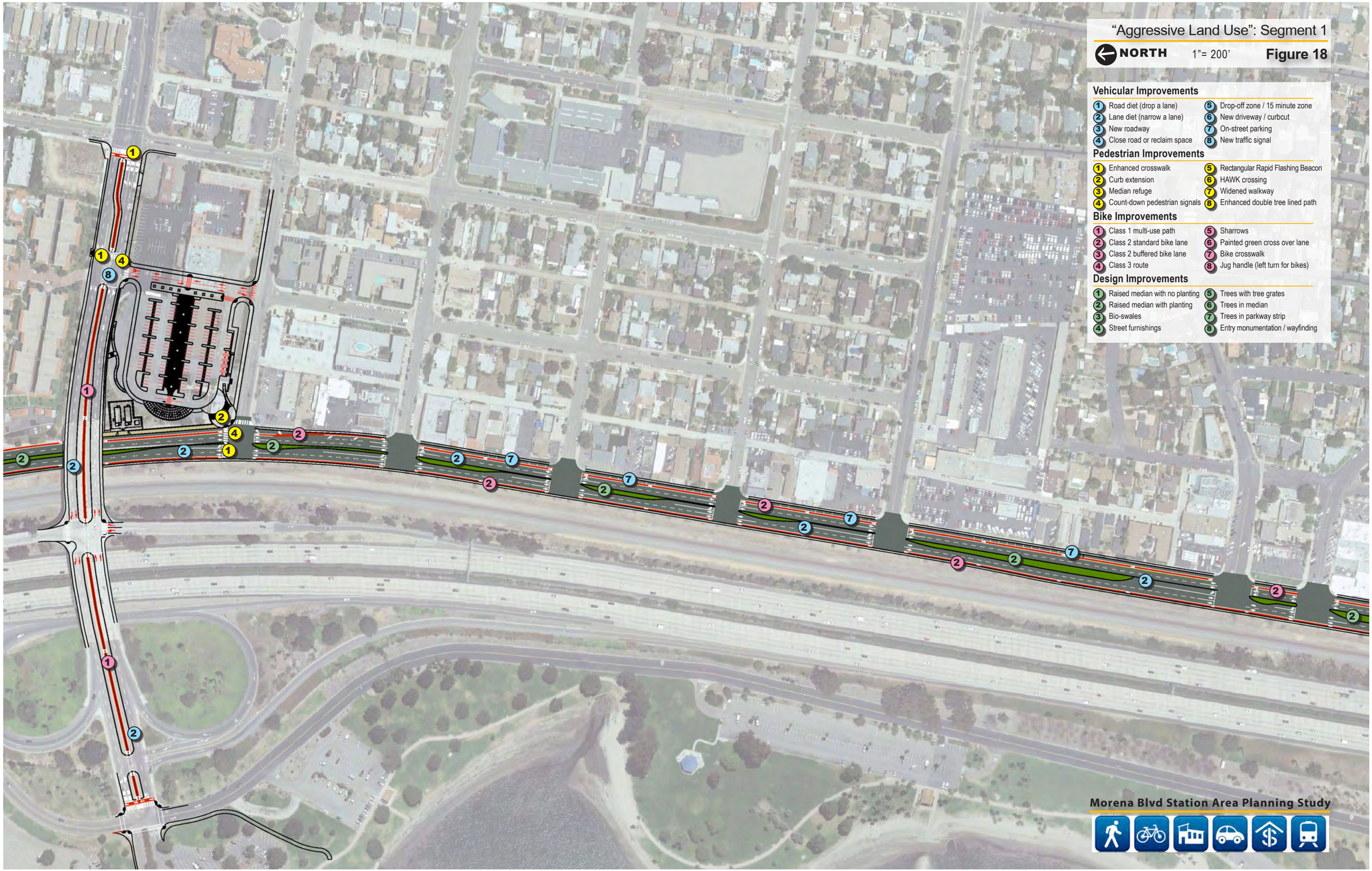


Figure 17 **Proposed Section 1:** North Morena Boulevard


“Aggressive Land Use”: Segment 1
NORTH
1”= 200’
Figure 18
Vehicular Improvements
1 Road diet (drop a lane)
2 Lane diet (narrow a lane)
3 New roadway
4 Close road or reclaim space
5 Drop-off zone / 15 minute zone
6 New driveway / curbcut
7 On-street parking
8 New traffic signal
Pedestrian Improvements
1 Enhanced crosswalk
2 Curb extension
3 Median refuge
4 Count-down pedestrian signals
5 Rectangular Rapid Flashing Beacon
6 HAWK crossing
7 Widened walkway
8 Enhanced double tree lined path
Bike Improvements
1 Class 1 multi-use path
2 Class 2 standard bike lane
3 Class 2 buffered bike lane
4 Class 3 route
5 Sharrows
6 Painted green cross over lane
7 Bike crosswalk
8 Jug handle (left turn for bikes)
Design Improvements
1 Raised median with no planting
2 Raised median with planting
3 Bio-swales
4 Street furnishings
5 Trees with tree grates
6 Trees in median
7 Trees in parkway strip
8 Entry monumentation / wayfinding
Morena Blvd Station Area Planning Study

“Aggressive Land Use”: Segment 2

NORTH 1”= 200’ **Figure 19**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

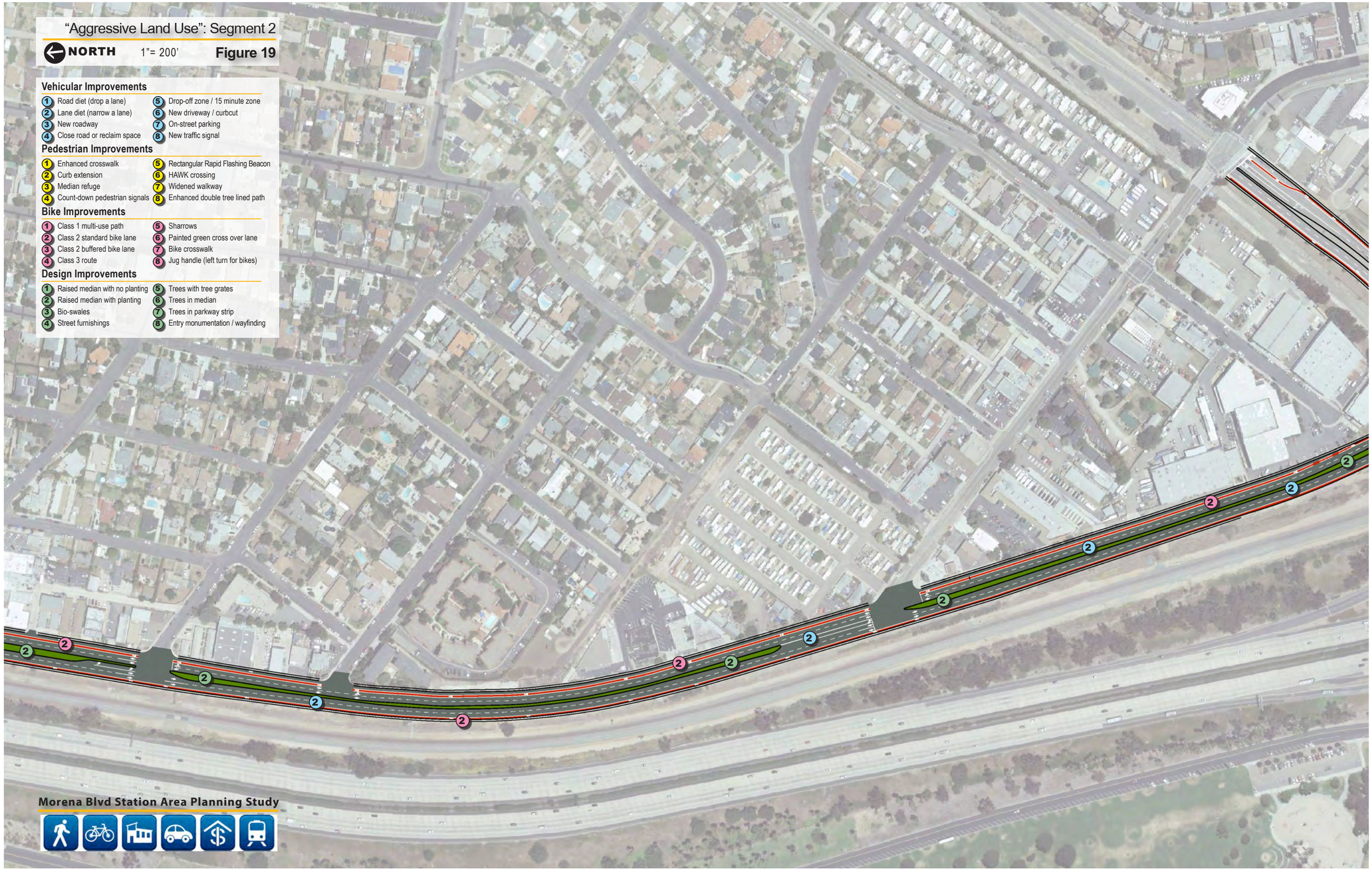
1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

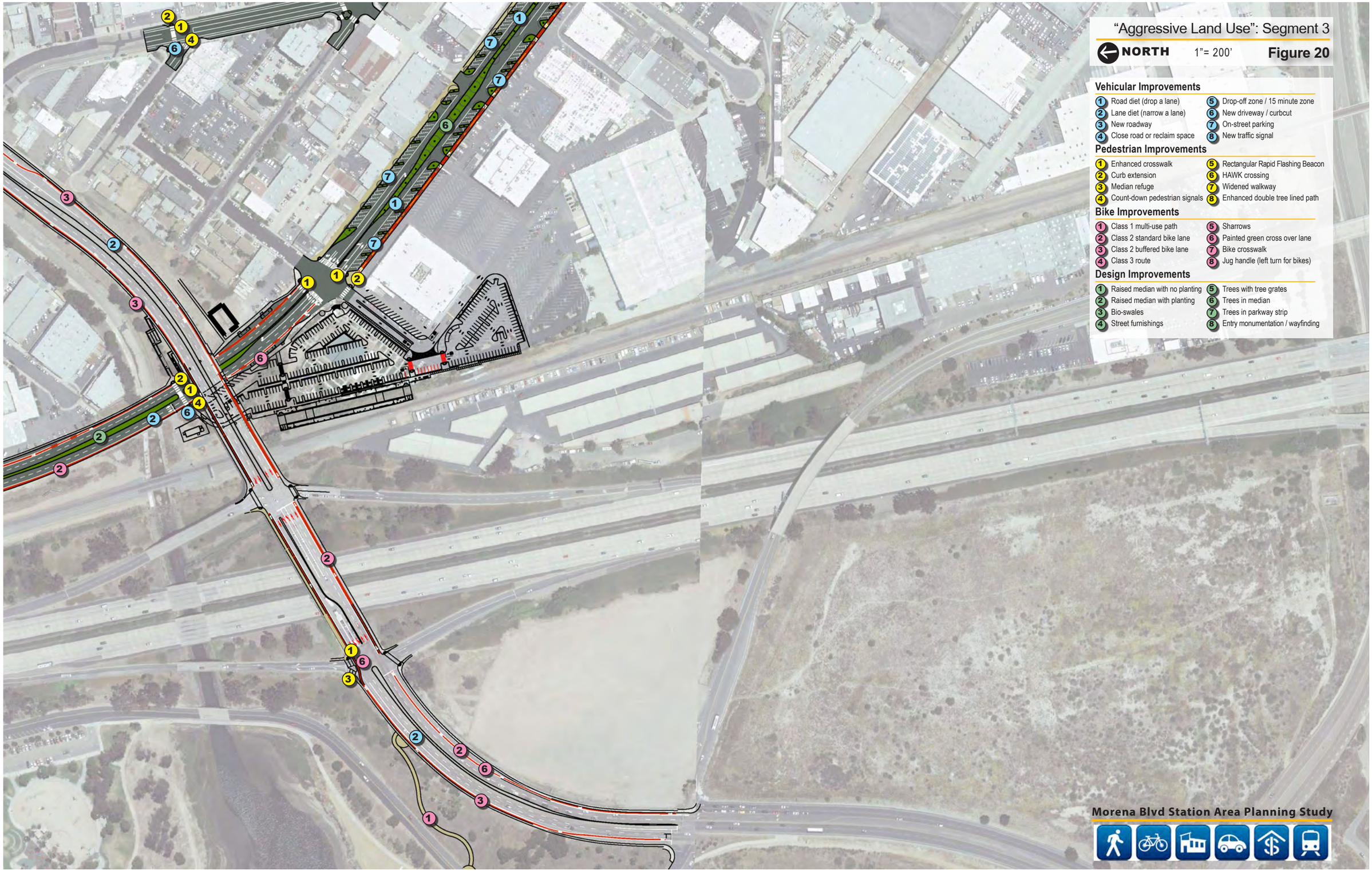
1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding



Morena Blvd Station Area Planning Study



"Aggressive Land Use": Segment 3

NORTH 1"= 200'

Figure 20

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

"Aggressive Land Use": Segment 4

NORTH 1"= 200' **Figure 21**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

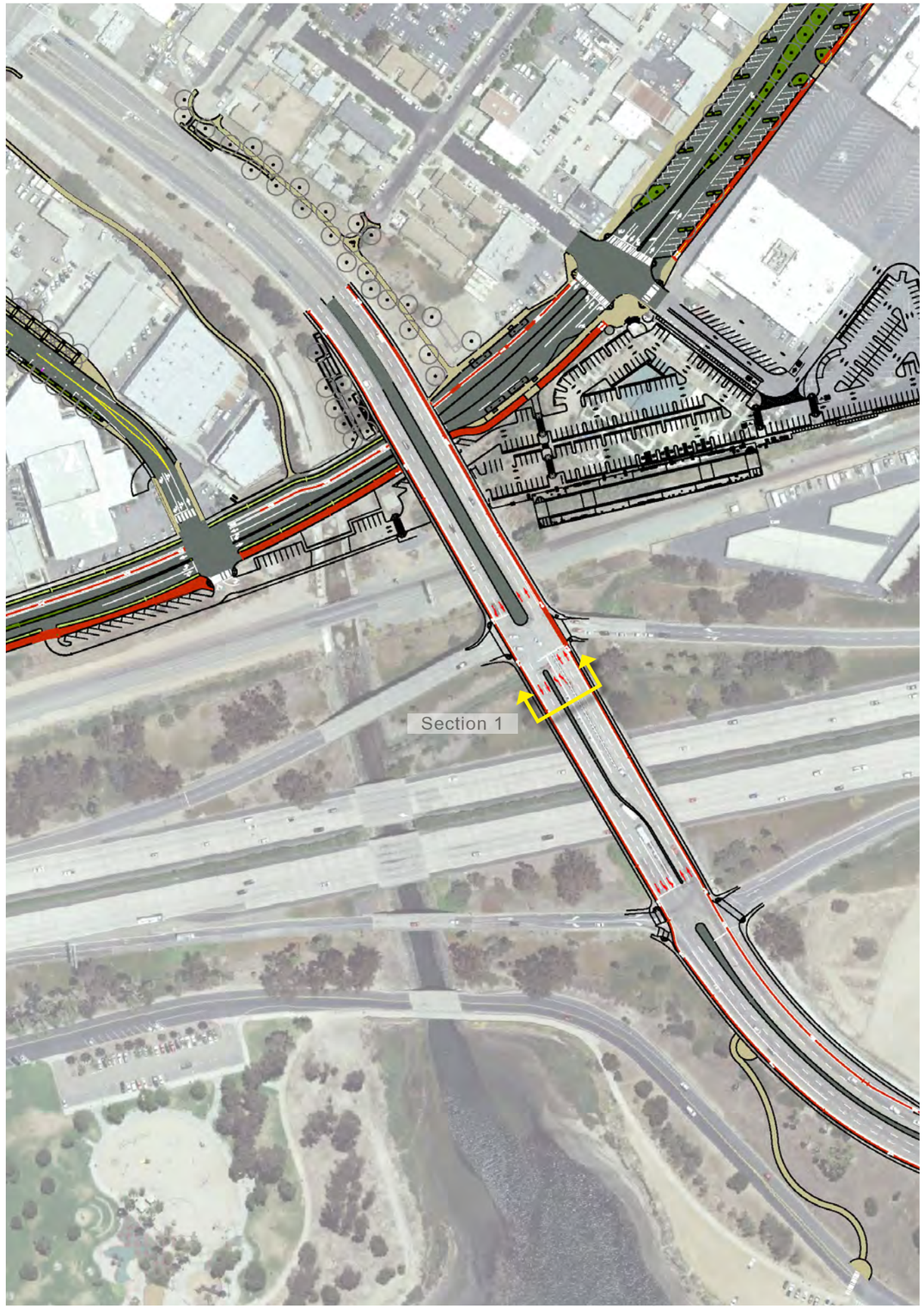


Figure 22: Plan View of Tecolote Bridge Crossing Improvements

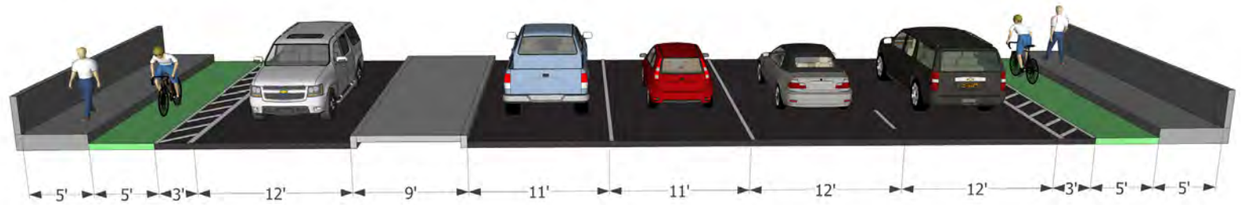


Figure 23: Single Thru Lane, Buffered Bike Lane with Bike / Ped Phase & no Turn on Red **Proposed Section 1:** Tecolote Bridge

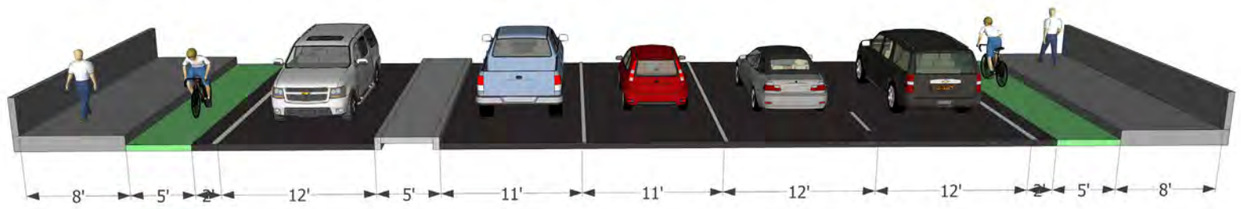


Figure 24: Single Thru Lane, Bike Lane, Painted Lane Crossovers, & Widened Walkway **Proposed Section 1:** Tecolote Bridge

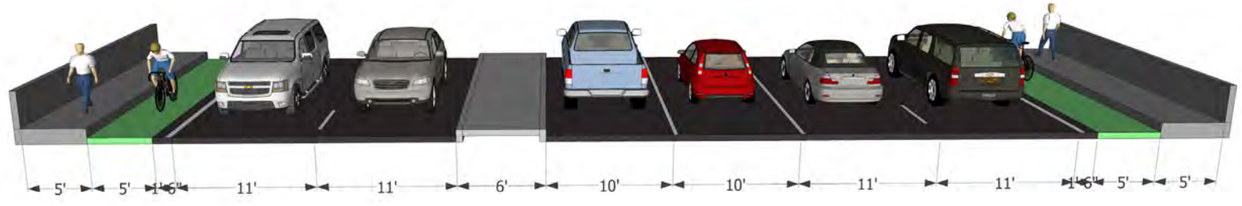


Figure 25: Standard Bike Lanes with Minor Median Modifications **Proposed Section 1:** Tecolote Bridge

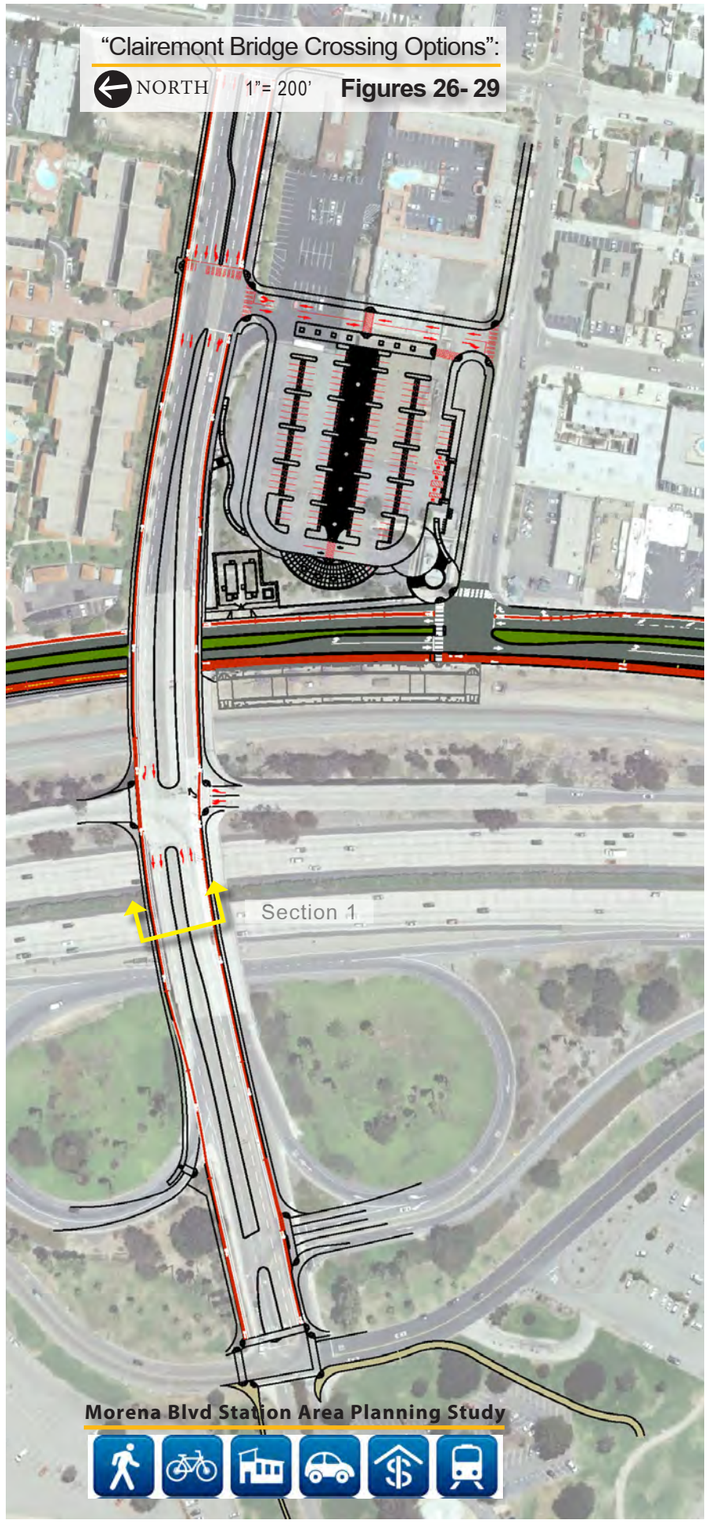


Figure 26: Plan View of Clairemont Bridge Crossing Improvements

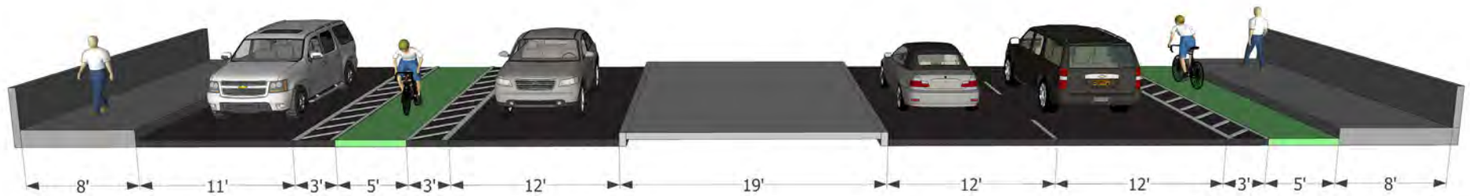


Figure 27: Buffered Bike Lanes with Right Turn Only Lane & Green Lane Crossovers

Proposed Section 1: Clairemont Bridge

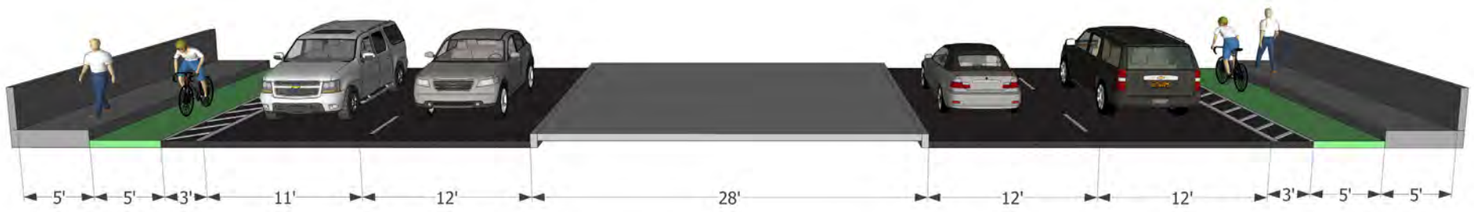


Figure 28: Buffered Bike Lanes Against Curb with Special Bike & Ped. Phase & Right Turn on Red Restrictions

Proposed Section 1: Clairemont Bridge

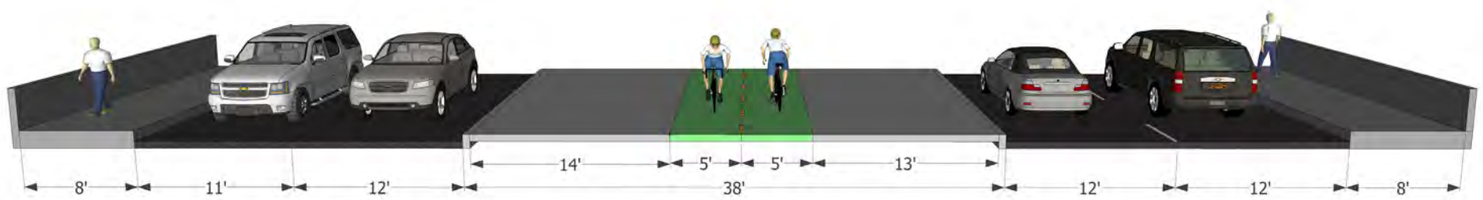


Figure 29: Median Based Bike Lane with Special Left Turn Signal Controls & Bike Signal Only Phase

Proposed Section 1: Clairemont Bridge

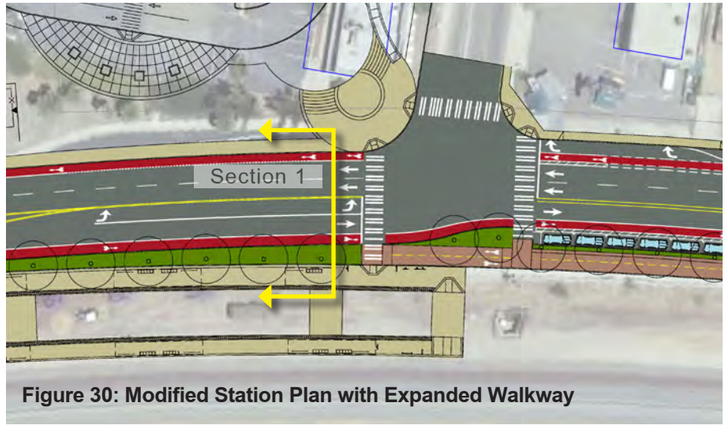


Figure 30: Modified Station Plan with Expanded Walkway

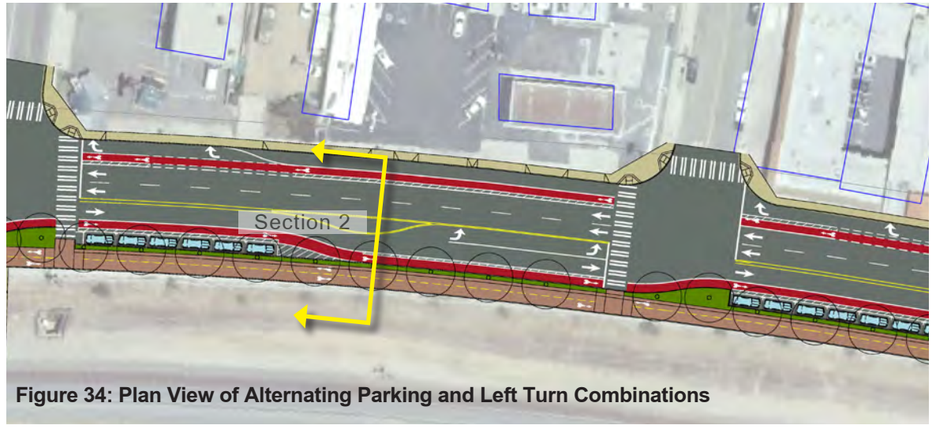


Figure 34: Plan View of Alternating Parking and Left Turn Combinations

"Post Workshop Options" South of Clairemont

NORTH 1"= 200' **Figures 30-37**

Morena Blvd Station Area Planning Study

Figure 31: Currently Planned MidCoast Station **Section 1:** Clairemont Trolley Station

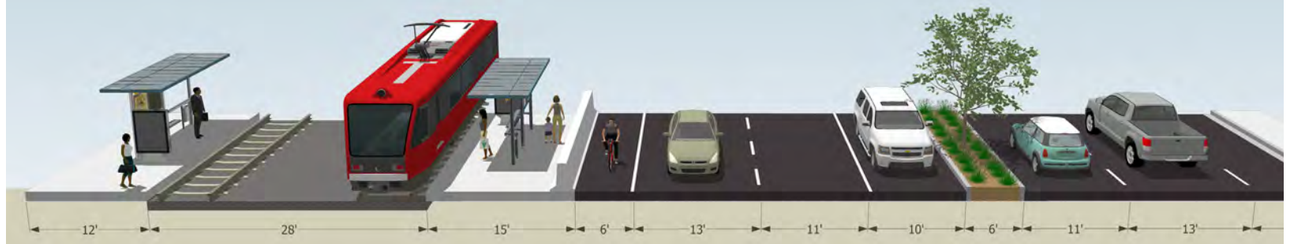


Figure 32: Buffer Provided by Parkway & Bike Lane **Section 1:** Clairemont Trolley Station

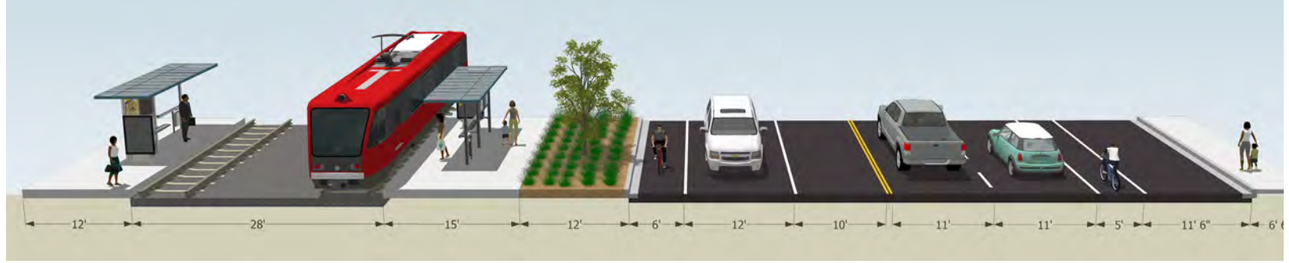


Figure 33: Add Fence, Walkway with Trees in Tree Grates & Buffered Bike Lane **Section 1:** Clairemont Trolley Station

Figure 35: Drop Southbound & Add Cycle Track **Section 2: South of** Clairemont Trolley Station

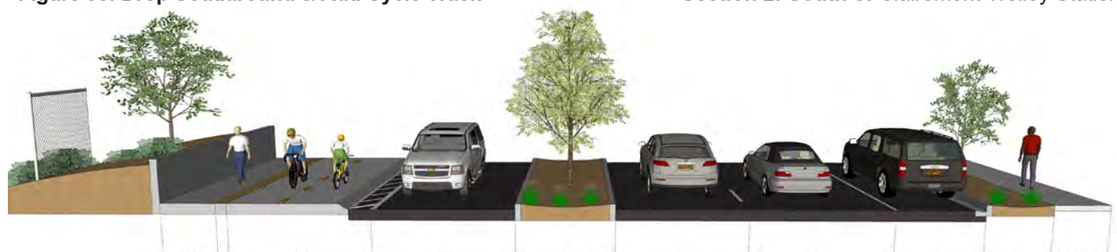


Figure 36: Drop Southbound & Add Buffered Bike Lanes **Section 2: South of** Clairemont Trolley Station

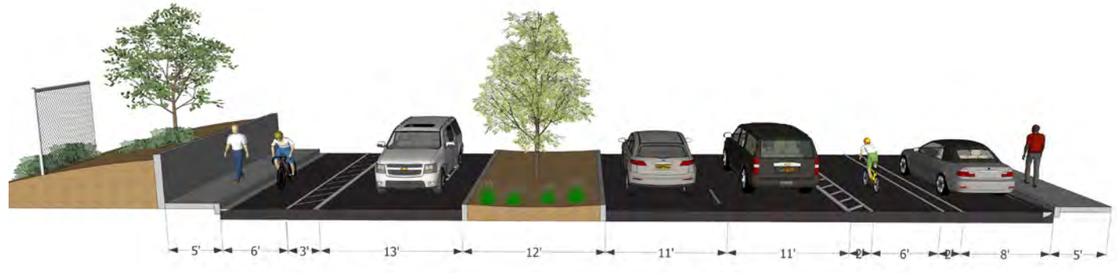


Figure 37: Remove East Side Parking & Add Bike Lanes **Section 2: South of** Clairemont Trolley Station

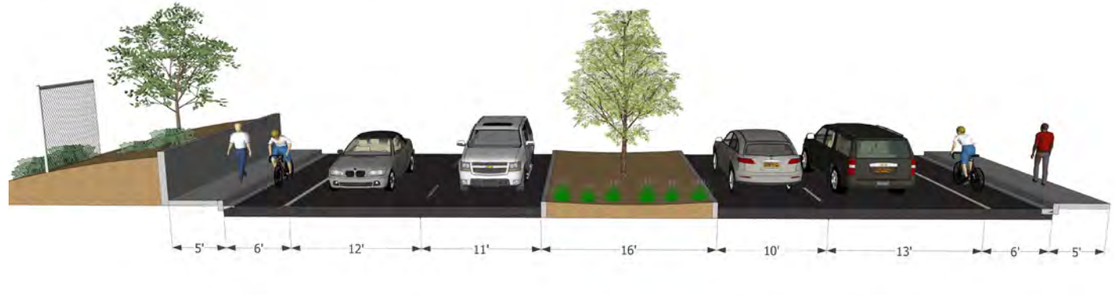
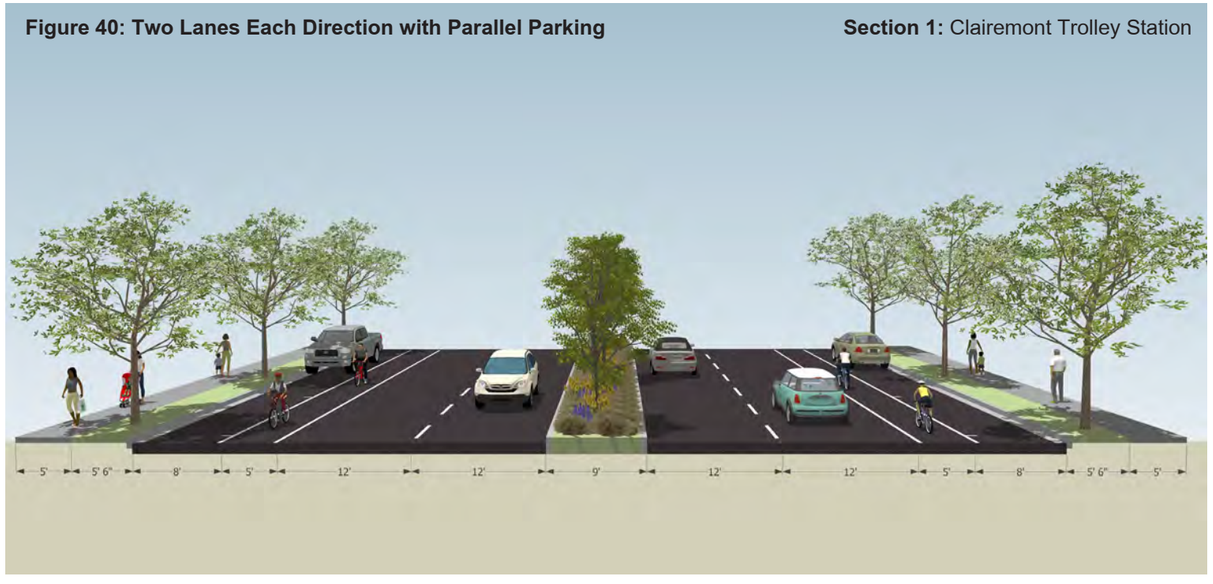


Figure 38: Plan View of Improvements South of Tecolote

Figure 39: One Lane Southbound with Green Backed Sharrow Lane Northbound **Section 1:** Clairemont Trolley Station

Figure 40: Two Lanes Each Direction with Parallel Parking **Section 1:** Clairemont Trolley Station



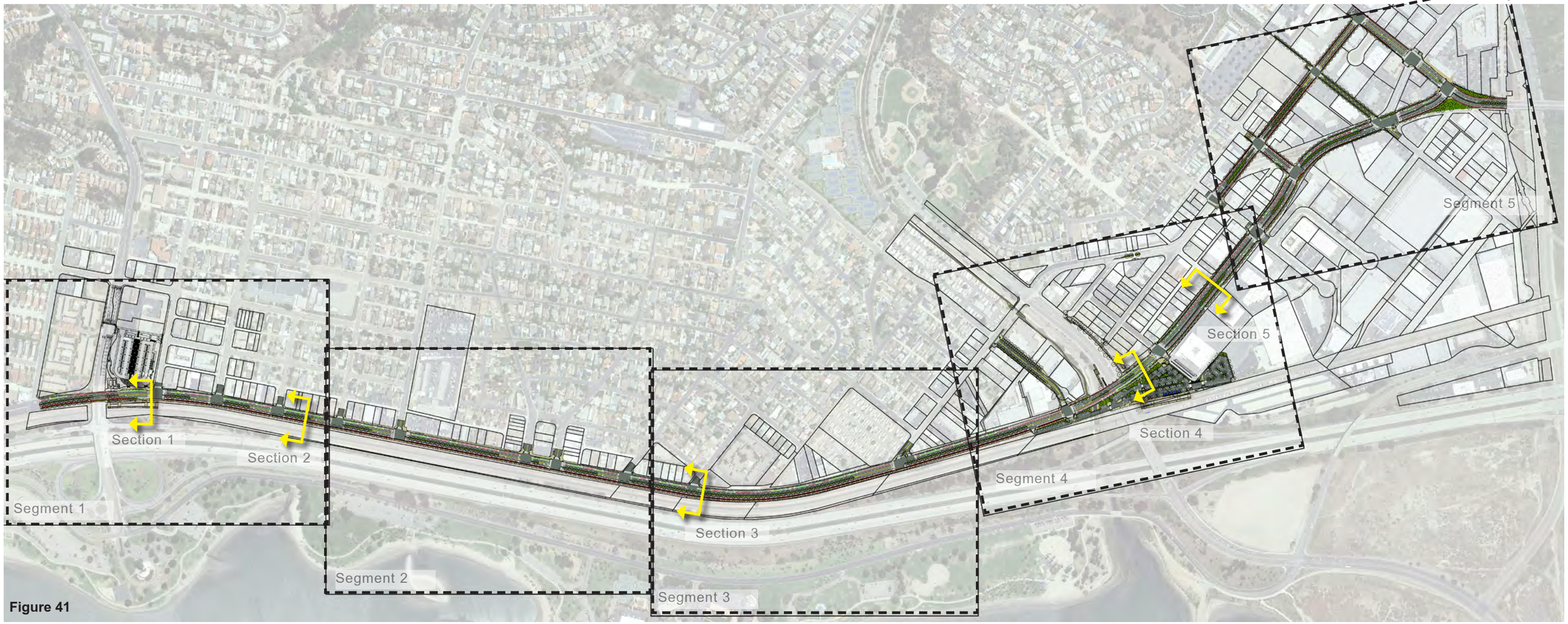


Figure 41

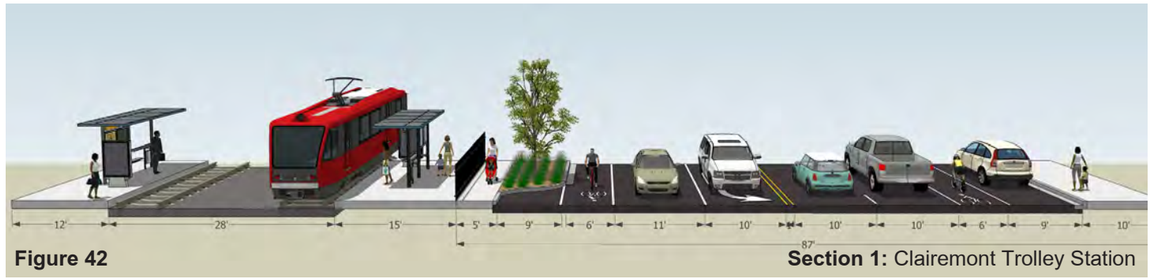


Figure 42 **Section 1:** Clairemont Trolley Station

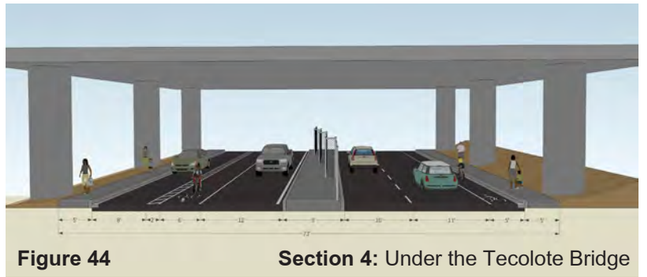


Figure 44 **Section 4:** Under the Tecolote Bridge

Figure 43 **Section 2 & 3:** North Morena Boulevard

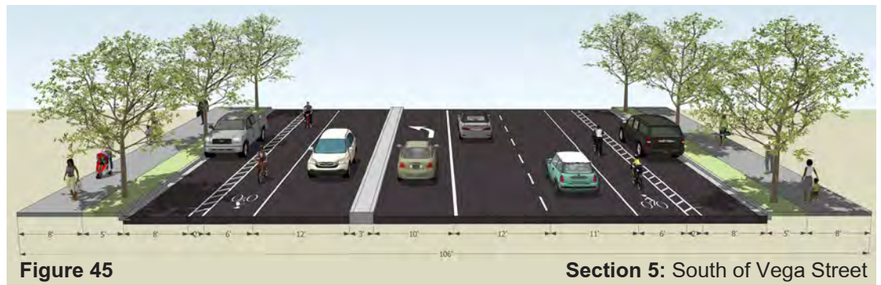


Figure 45 **Section 5:** South of Vega Street

Key for Recommended Circulation Plan:

NORTH 1"= 150' **Figures 41-45**

Morena Blvd Station Area Planning Study

Street Improvements: Segment 1 Plan

NORTH 1"= 150' **Figure 46**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Street Improvements: Segment 1 Detail

NORTH 1"= 60' **Figure 47**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

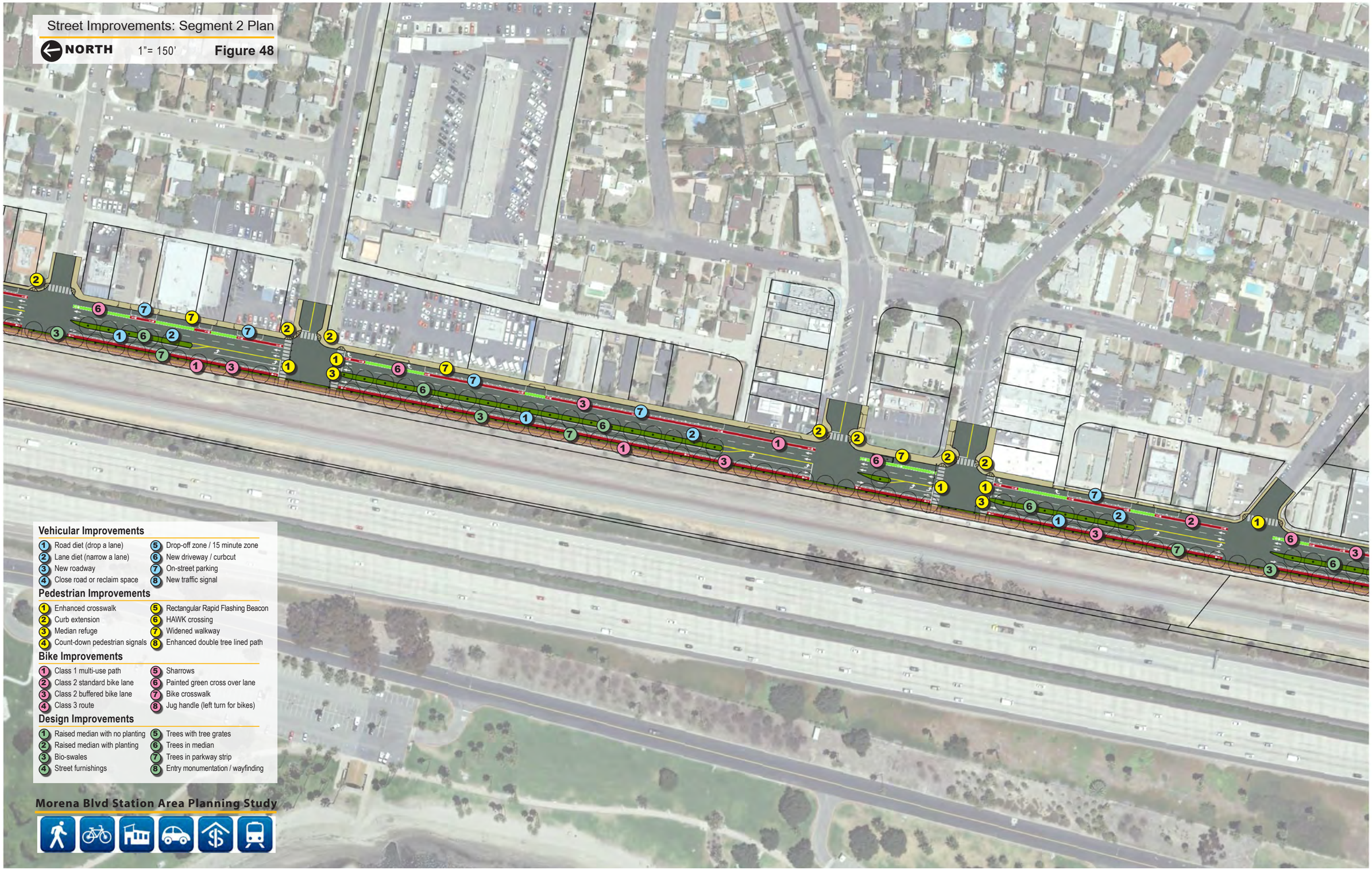
Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Morena Blvd Station Area Planning Study

Street Improvements: Segment 2 Plan

NORTH 1"= 150' **Figure 48**



Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Morena Blvd Station Area Planning Study

North Segment Vehicular Concepts:

NORTH 1"= 60'

Figure 49

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Street Improvements: Segment 3 Plan

NORTH 1"= 150' **Figure 50**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Morena Blvd Station Area Planning Study

Street Improvements: Segment 3 Detail

NORTH 1"= 60'

Figure 51

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Morena Blvd Station Area Planning Study

Street Improvements: Segment 4 Plan

NORTH 1"= 150' **Figure 52**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path
9. Stairs/Ramp

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Street Improvements: Segment 4 Plan

NORTH 1"= 60'

Figure 53

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path
9. Stairs/Ramp

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Morena Blvd Station Area Planning Study

Street Improvements: Segment 5 Plan

NORTH 1"= 150' **Figure 54**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Morena Blvd Station Area Planning Study

Street Improvements: Segment 5 Detail

NORTH 1"= 60'

Figure 55

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Street Improvements: Segment 5 Detail

NORTH 1"= 60' **Figure 56**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

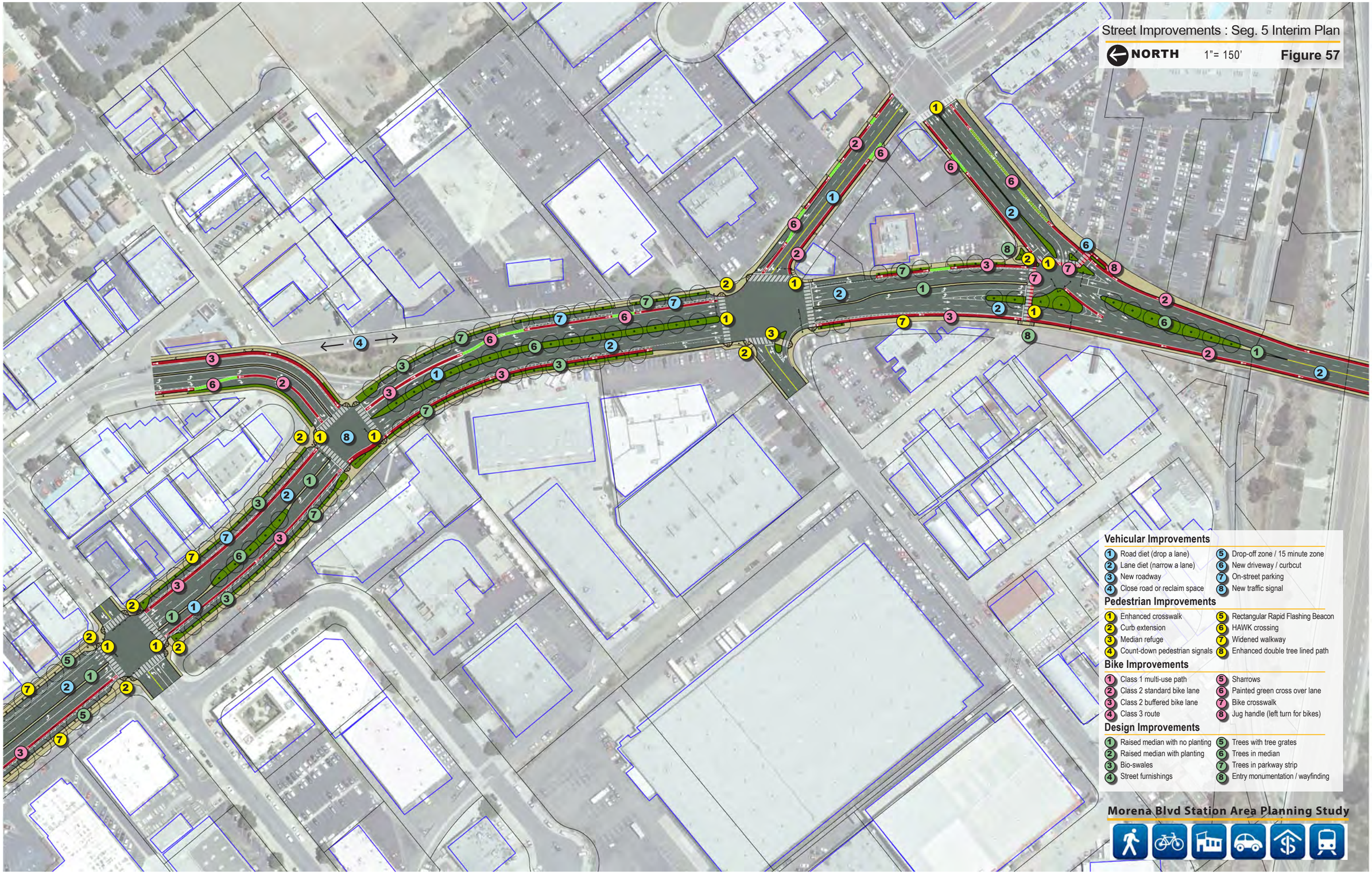
Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

Morena Blvd Station Area Planning Study


Street Improvements : Seg. 5 Interim Plan
NORTH
1"= 150'
Figure 57
Vehicular Improvements
1 Road diet (drop a lane)
2 Lane diet (narrow a lane)
3 New roadway
4 Close road or reclaim space
5 Drop-off zone / 15 minute zone
6 New driveway / curbcut
7 On-street parking
8 New traffic signal
Pedestrian Improvements
1 Enhanced crosswalk
2 Curb extension
3 Median refuge
4 Count-down pedestrian signals
5 Rectangular Rapid Flashing Beacon
6 HAWK crossing
7 Widened walkway
8 Enhanced double tree lined path
Bike Improvements
1 Class 1 multi-use path
2 Class 2 standard bike lane
3 Class 2 buffered bike lane
4 Class 3 route
5 Sharrows
6 Painted green cross over lane
7 Bike crosswalk
8 Jug handle (left turn for bikes)
Design Improvements
1 Raised median with no planting
2 Raised median with planting
3 Bio-swales
4 Street furnishings
5 Trees with tree grates
6 Trees in median
7 Trees in parkway strip
8 Entry monumentation / wayfinding
Morena Blvd Station Area Planning Study

Street Improvements : Seg. 5 Interim Detail

NORTH 1"= 60' **Figure 58**

Vehicular Improvements

1. Road diet (drop a lane)
2. Lane diet (narrow a lane)
3. New roadway
4. Close road or reclaim space
5. Drop-off zone / 15 minute zone
6. New driveway / curbcut
7. On-street parking
8. New traffic signal

Pedestrian Improvements

1. Enhanced crosswalk
2. Curb extension
3. Median refuge
4. Count-down pedestrian signals
5. Rectangular Rapid Flashing Beacon
6. HAWK crossing
7. Widened walkway
8. Enhanced double tree lined path

Bike Improvements

1. Class 1 multi-use path
2. Class 2 standard bike lane
3. Class 2 buffered bike lane
4. Class 3 route
5. Sharrows
6. Painted green cross over lane
7. Bike crosswalk
8. Jug handle (left turn for bikes)

Design Improvements

1. Raised median with no planting
2. Raised median with planting
3. Bio-swales
4. Street furnishings
5. Trees with tree grates
6. Trees in median
7. Trees in parkway strip
8. Entry monumentation / wayfinding

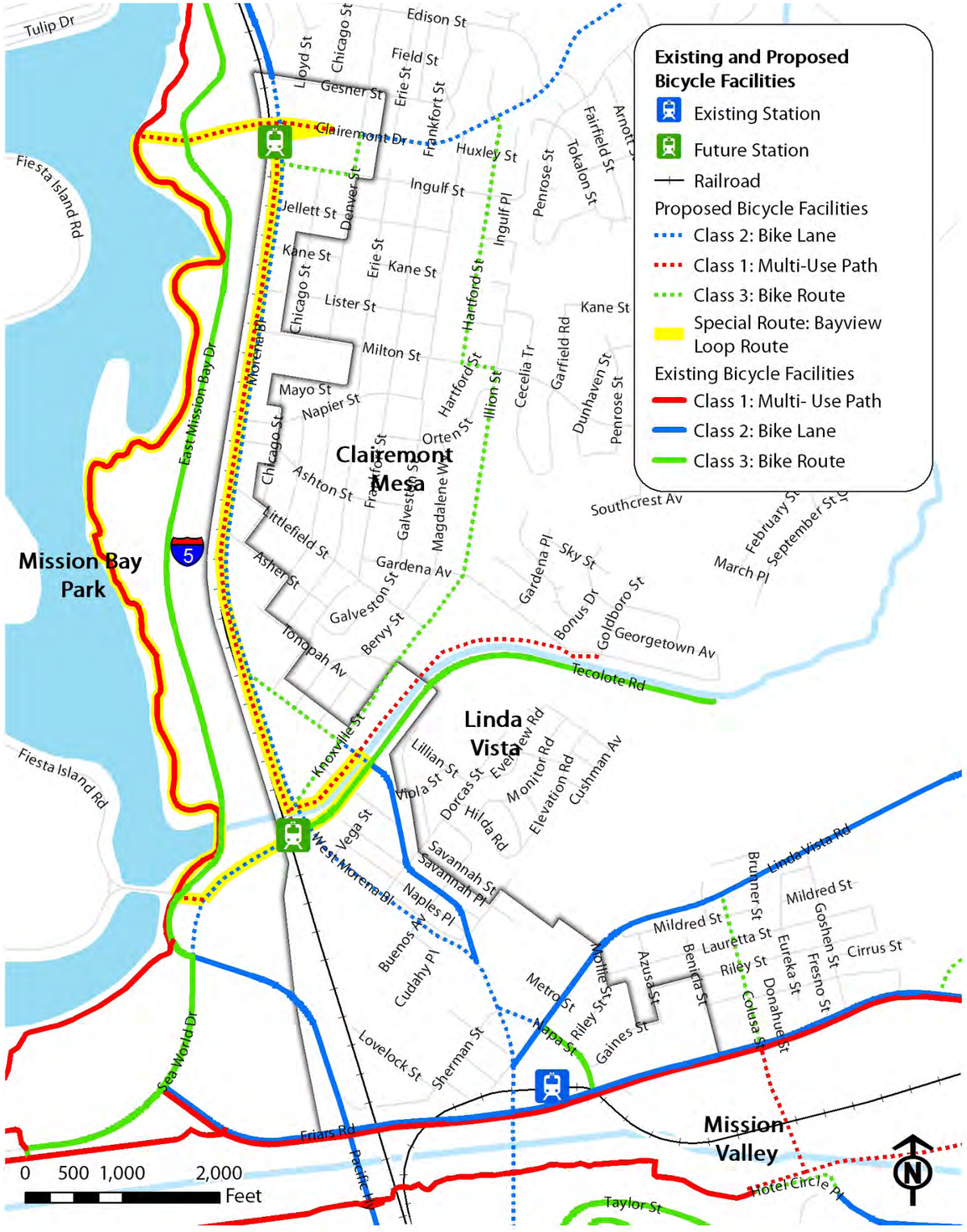


Figure 59: Adopted & Recommended Bike Facilities with "Bayview Loop" Highlighted Connecting Mission Bay, Mission Bay Bike Path, Fiesta Island, Tecolote Canyon, Tecolote Creek, Linda Vista and Clairemont Communities

Figure 60: Map of the Recommended Tecolote Bridge Crossing Plan

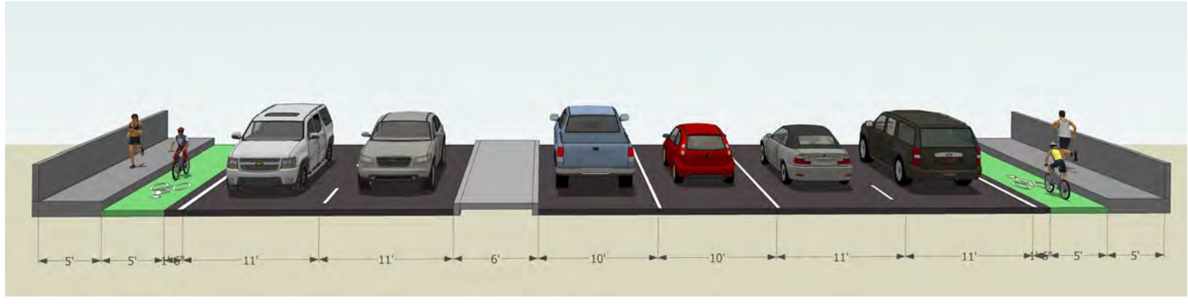


Figure 61: Buffered Bike Lane with Crossover Bike Painted Lanes
Section 1: Tecolote Bridge

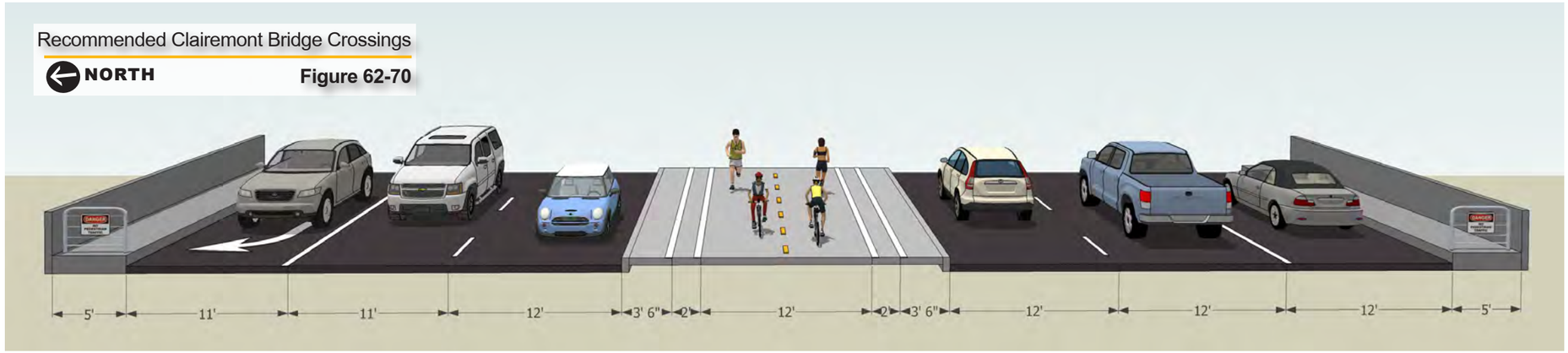


Figure 62: Cross Section Showing the Median Running Multi-use Buffered & Barriered Path

Section 1: Clairemont Bridge

Figure 63: Bike & Pedestrian Control Devices

Figure 64: Bike Left Turn Jug Handle

Figure 69: Perspective of Typical Intersection Control and Alignments

Figure 65: Raised Curb with Candlestick Markers on Curb

Figure 66: Signage / Barrier Edges on Raised Curbs or Rolled Curbs

Figure 67: Actuators / Sensors for Bike Crossing

Figure 68: Pedestrian Control, Signage & Barriers

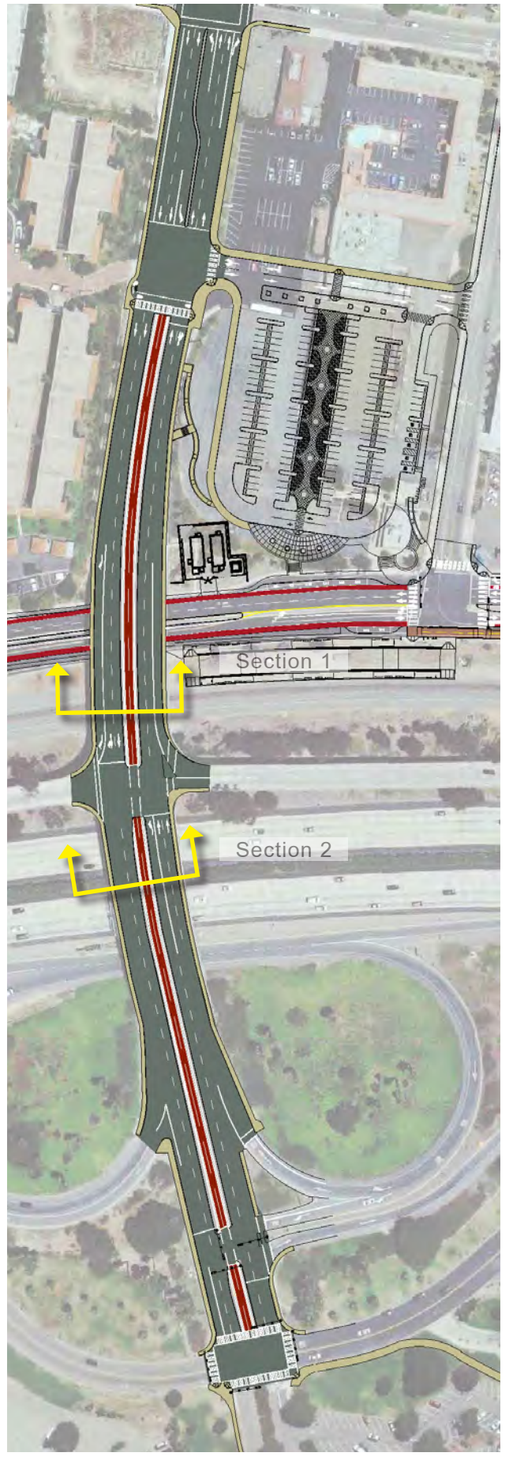


Figure 70: Plan view of Proposed Median Multi-use Path Across Clairemont Bridge

7 Implementation Strategy

7.1 Identification of Necessary Zoning Changes

The land use plan proposed in the MBAP will require changes to the existing Community Plans for the Clairemont Mesa and Linda Vista community planning areas. These changes will include revisions to the Community Plan land uses and their application to the land development code (zoning). Not all land uses/zones will need to be changed in order to realize the vision documented in the MBAP, but many will. Therefore, the following sections provide an overview of areas that will likely require a change.

7.1.1 Methodology

In order to determine which land uses and zones might require a change, the planning team created three matrices detailing the compatibility of proposed land uses to those existing in the study area. The three matrices each analyzed either use, density (in terms of DU), or density (in terms of FAR). Types of "compatibility" included either yes, no, maybe, or N/A. The appropriate compatibility type was chosen based on land use and density as proposed in the Preferred Land Use Plan as compared to uses and densities allowed in the existing zone for that site.

"Yeses" were assigned for uses/densities that are allowed by-right according to current zoning. "Nos" were assigned for uses/densities that are not allowed according to current zoning. For density compatibility, it was important whether or not the zone allowed for density bonuses. If the zone did not allow for a density bonus, then the Preferred Land Use Plan density for that site was either a "yes" or "no." If the zone allowed for density bonuses, then the Preferred Land Use Plan density could also be a "maybe."

In terms of use, "maybes" were assigned for uses that were allowed either with limitations or with use permit restrictions. For density, "maybes" were assigned for densities that could be achieved through attainment of a bonus. Because of the intricate and site-specific calculations necessary to determine bonuses, the MBAP took a high-level approach to determining bonus achievement. If an existing zone allowed a bonus, and the Preferred Land Use Plan proposed a density between the by-right density level and the level of the next most dense threshold, then the density compatibility was assigned a "maybe." Once a proposed density exceeded not only the by-right level, but also the level of the next most dense threshold, then it was assigned a "no." The result was a scale that generalized the flexibility of the existing code, so as to recognize areas that may be able to accommodate the plan's recommendations through extraordinary measures such as use permits and density bonuses.

Once the three compatibility matrices were completed, they were applied to a map (and the associated attribute table) created by combining the Preferred Land Use Plan with existing zones. Lastly, all the compatibility factors were combined to create a bottom-line compatibility recommendation map/table. While the categories of compatibility remained the same (yes, no, maybe, N/A), the scoring was determined as follows: if any individual compatibility category contained a "no," then the bottom-line recommendation was a "no." If there were no "nos," but any of the individual compatibility categories were a "maybe," then the bottom-line recommendation was "maybe." The only way a bottom-line

compatibility recommendation would be a "yes" is in the instance that all individual categories were either "yeses" or a combination of "yeses" and "N/As."

7.1.2 Results

Compatibility between the Preferred Land Use Plan land uses and existing zoning is greatest in terms of FAR (see Figure 7-1). Throughout the study area, there are almost no incompatibilities. This is likely due to the fact that existing zoning includes many intensive commercial land uses that include an FAR of up to 2.0. Because the proposed residential land uses are reported in terms of DU vs. FAR, even though they are dense, they do not trigger an incompatibility in terms of FAR.

The second most compatible aspect of the Preferred Land Use Plan is in terms of allowed uses (see Figure 7-2). The main instances of use incompatibility occur in existing single family residential and light industrial zones. These zones are intentionally restrictive and are not well suited for mixed-used development. In particular, use incompatibilities occur at the single family zone at the RV park along Knoxville, the RV park on Frankfort, and the car dealership along Milton. Incompatibilities also occur at the light industrial properties along West Morena and Knoxville and at the A-1 Storage.

The most incompatible aspect of the Preferred Land Use Plan when compared to existing zoning is in terms of DU density (see Figure 7-3). This is not surprising as the plan proposes a significant increase in residential units in the study area and the existing commercial zoning generally limits residential density to 29 DU/acre. Most of the areas of incompatibility occur in the southern portion of the study area (south of the northern Morena/West Morena merge). While many of these areas do not have residential units planned under the Preferred Land Use Plan, those that do almost all exceed the existing residential density allowance.

The bottom-line compatibility analysis shows that about three-fifths of the study area (in terms of acreage) will need a land use/zoning change to accomplish the vision of the Preferred Land Use Plan (see Figure 7-4). The light industrial areas south of Buenos Avenue and West of Morena/West Morena will not need a change, some of the commercial properties north of Morena between Cushman and Tecolote will not need a change, and many of the properties along Morena north of Asher Street will also not need a change. The remaining areas will need, or will likely need, to be adjusted to match the Preferred Land Use Plan.

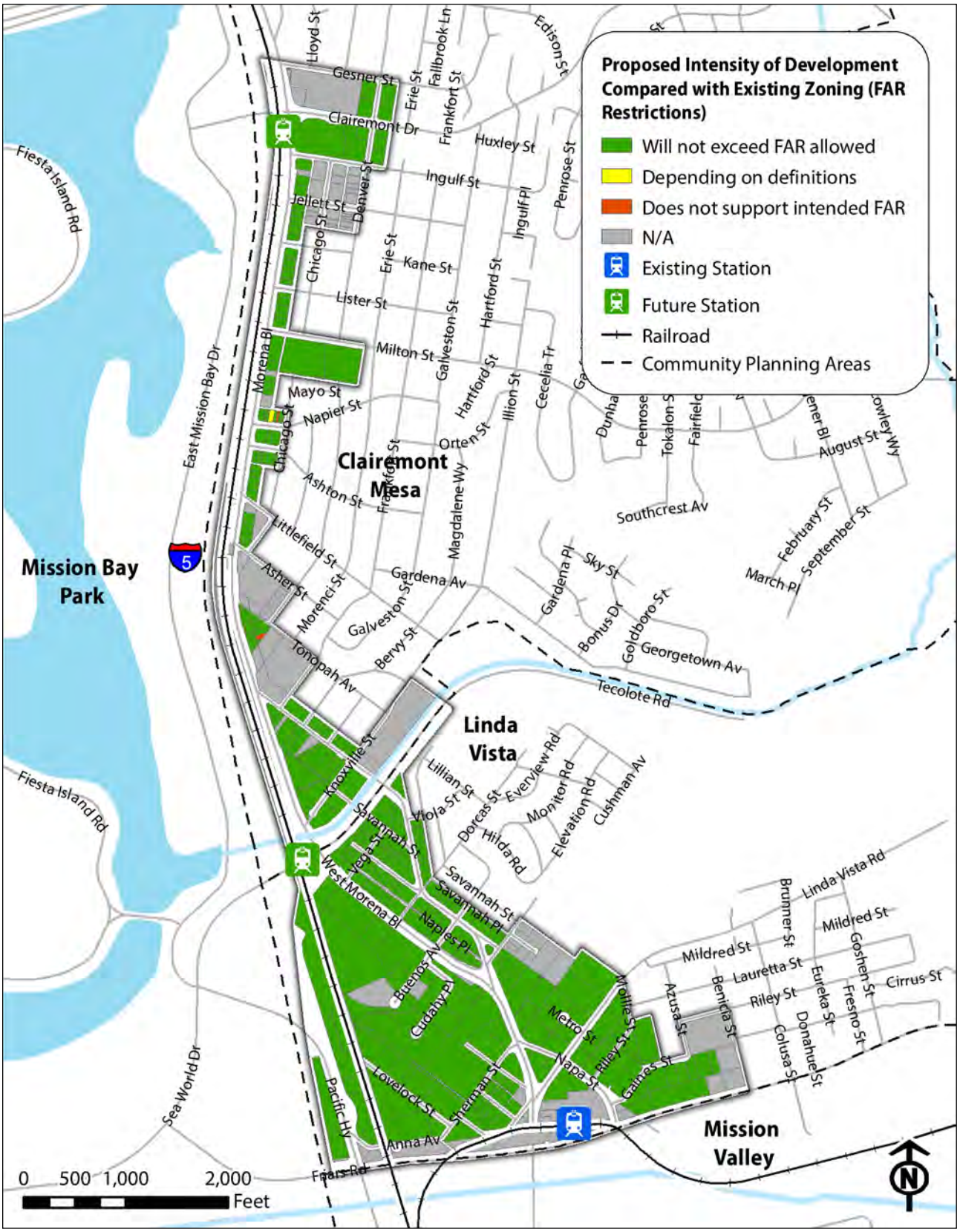


Figure 7-1: Comparison of Existing/Proposed Non-Residential FAR

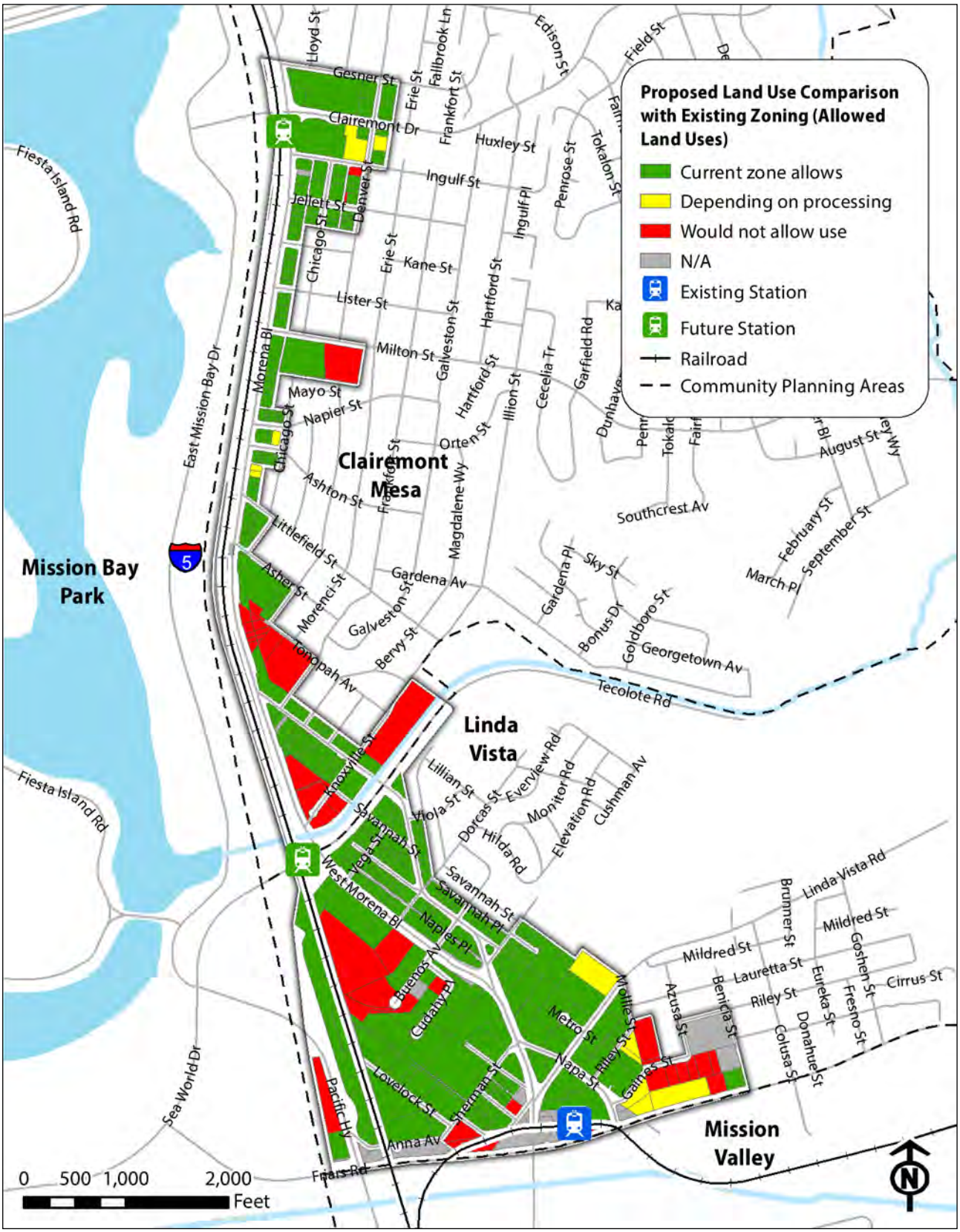


Figure 7-2:Comparison of Existing/Proposed Uses

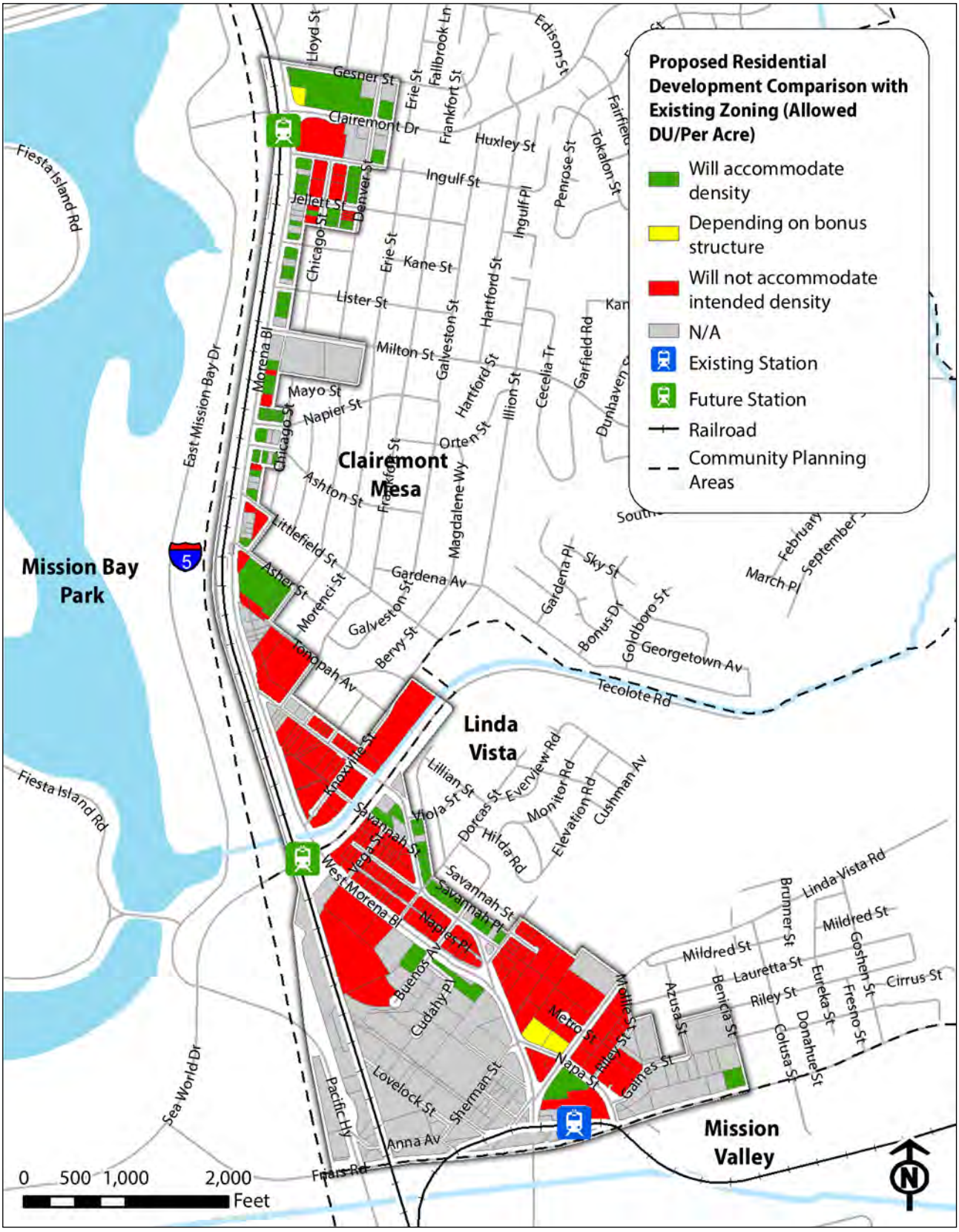


Figure 7-3:Comparison of Existing/Proposed Residential Density

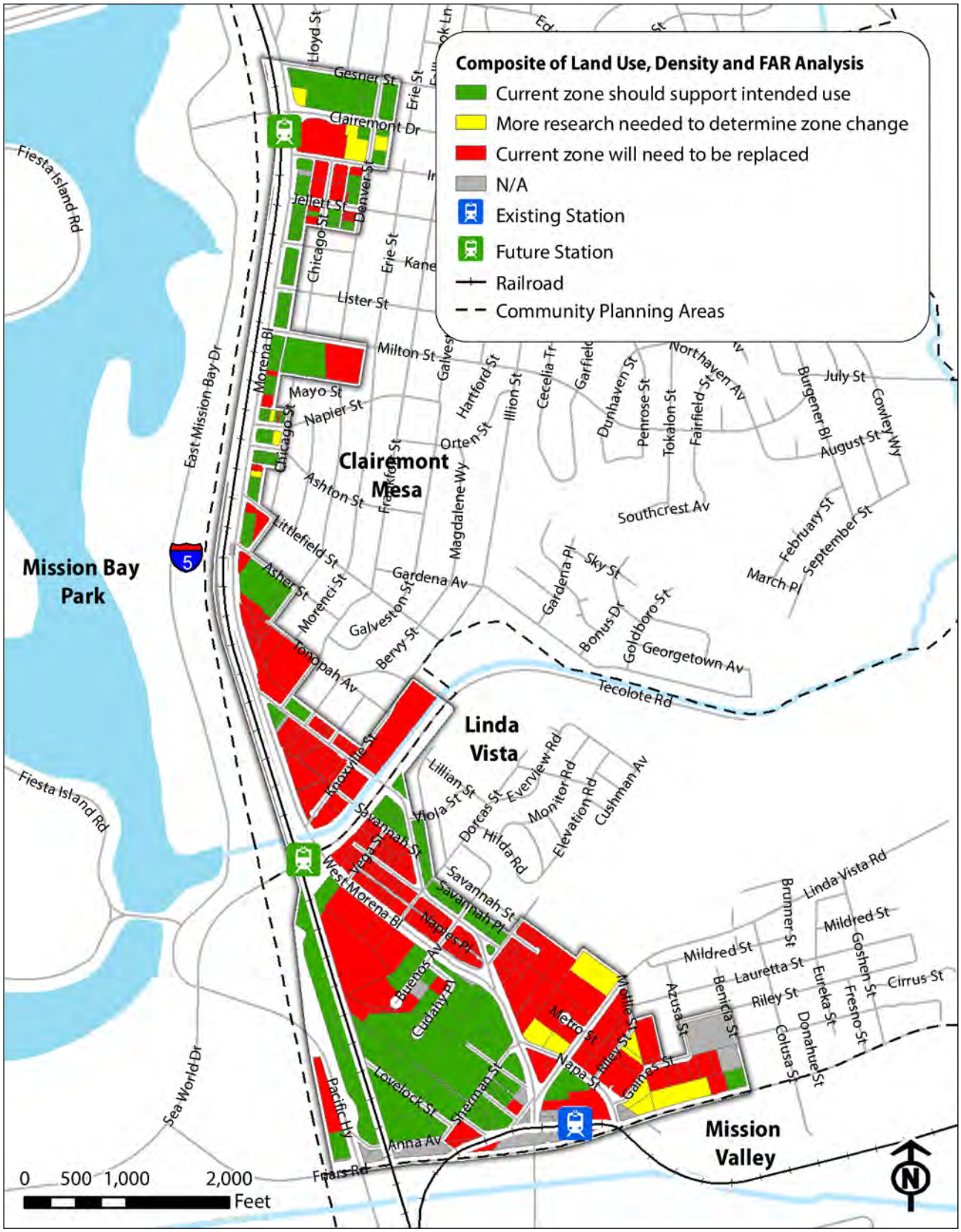


Figure 7-4:Composite of Compatibility Factors

7.2 Land Use and Zoning Implementation Recommendations

Incompatibility Issue A:

- One of the largest barriers to mixed use and transit oriented development that the Morena Boulevard Station Area will face as new development comes forth is the imposition of the Clairemont Mesa Height Limit Overlay Zone. This Zone covers a large portion of the study area and restricts development to 30 ' to "ensure that the existing low profile development in Clairemont Mesa will be maintained and that public views from western Clairemont Mesa to Mission Bay and the Pacific Ocean are protected."

This restriction will make it very difficult for development to reach the higher end of the allowed densities.

Figure 7-5: Clairemont Mesa Height Limit Overlay Zone

Recommendation A1:

- Consider expanding the Transit Overlay Zone language to include provisions to provide a mix of higher density and intensity commercial, office and residential uses as part of or in proximity to transit stations.

Recommendation A2:

- Consider raising the height restriction to 40', to allow for 3 story development. The majority of the study area has a base zone maximum residential du standard of 1 du/1,500 square feet (or approximately 29 du/acre), the multi-family zones near Clairemont Drive have a higher density limit, at 1 du/1,000 square feet,

(approximately 44 du/acre). With the absence of a 30' height restriction, it would be more realistic to achieve densities of 40 du/ac.

Incompatibility Issue B:

- The large majority of incompatibility between existing zoning and proposed future land use occurs with the introduction of Commercial/Residential Mixed use on properties that are currently zoned commercial. While most commercial designations allow for residential uses, the FAR or Density requirement is too low to meet the plan objectives..

Recommendation B:

- In these instances, where the base zone is lower intensity commercial in nature (CN-1-2,CC-1-1, CC-1-3, CC-3-4), consider applying the designation to CC-4-5 as outlined below for all areas within approximately ½ mile of a transit station.

Zoning District Code	Zoning District Name	Allowed Uses (broadly)	Density	Intensity	Building Heights
CC-4-5	Community-serving Commercial (high Intensity, pedestrian orientation)	Heavy commercial uses and residential uses	maximum density of 1 du for each minimum 1,500 square feet of lot area	Maximum FAR: 2.0 2.0 FAR bonus with mixed-use (50% of bonus must be residential)	100'

For areas outside of the ½ mile transit station radii, consider applying the designation to CC-4-2 as outlined below:

Zoning District Code	Zoning District Name	Allowed Uses (broadly)	Density	Intensity	Building Heights
CC-4-2	Community-serving Commercial (high intensity, strip commercial characteristics)	heavy commercial uses and residential uses	maximum density of 1 du for each minimum 1,500 square feet of lot area	Maximum FAR: 2.0	60'

Incompatibility Issue C:

- Another key incompatibility issue existing between current city zoning and proposed future land use occurs with the introduction of Commercial/Residential Mixed use into areas currently zoned industrial light (or IL-3-1). One high acre occurrence in particular, is just north of Tecolote Road along Morena Boulevard, The Light industrial zone allows a mix of light industrial, office, and commercial uses but prohibits residential use. With the proposed introduction of Mixed Use, these areas will need to be rezoned. No zones other than possibly the Urban Village Overlay Zone can possibly address the incompatibility issues that will ensue.

Recommendation C1:

- Apply the Urban Village Overlay Zone to the LI zoned property being proposed for Mixed Use Commercial/Residential. The type of "urban village" development proposed would likely have to have a live/work or be urban/industrial nature in order to fit into the existing context.

Recommendation C2:

- Consider applying the Transit Overlay Zone to the Tecolote Station Area and revise the overlay zone language to include provisions for providing a mix of higher density and intensity commercial, office and residential uses as part of or in proximity to transit stations.

Incompatibility Issue D:

- Incompatibility issue are also present on properties currently zoned residential that are being proposed for Commercial/Residential Mixed use. A number of Single and Multi-family parcels will be impacted by increased densities and integration of Retail.

Recommendation D:

- For parcels currently zoned for single family residential, consider applying the City's RM-3 designation with specific revisions to the allowable use table. Revisions should include permitting most retail sale categories, as well as dining establishments, and possibly office uses.
- For parcels currently zoned for multi-family residential, apply a designation of CC-3 (either 4 or 5 depending on the intensity of the nearby corridor/roadway).

Incompatibility Issue E:

- Parking reductions may be necessary for the proposed higher density developments to occur.

Recommendation E:

- The Transit Overlay Zone applies to the area immediately surrounding the LRT station at Clairemont Drive, but could be applied around the LRT station at Tecolote as well. The purpose of this zone is to identify areas with reduced parking demand and to lower off-street parking requirements accordingly.

Incompatibility Issue F:

- Well-designed mixed use developments in the plan area will be more successfully integrated projects if development regulations were more flexible. Future development that occurs along Morena Boulevard which would benefit from siting a variety of uses and obtain flexibility in site planning and development regulations may be applied as part of a land use plan implementation program or at the request of an applicant may be designated within the Urban Village Overlay Zone whose purpose is to allow for compact mixed use development.

Recommendation F:

- Mixed Use Development projects on sites larger than 3 acres should be designated within the Urban Village Overlay Zone.

7.2.1 Changes initiated by Urban Design Guidelines (Optional)

- Incorporate provisions for permitting food trucks in the allowable use table (Section 6.7 of the DG's encourage them along sidewalk or in parking lots).
- Consider include standards that require that upper stories be stepped back along the following key corridors: Linda Vista Road, Clairemont Drive, Milton Street, and Tecolote Road. (as recommended in the DG's section 6.11.1)

7.3 Mobility Projects (to be submitted with Final Report)

The mobility concepts presented in Chapter 6 inform a number of improvement projects that will be necessary to accomplish the vision of the MBAP. After receipt of input from city staff and the community, the concepts will be refined and formalized. Once this is complete, the following detailed information will be generated:

- Project List
- Concept Illustrations
- Planning Level Cost Estimates

7.4 Funding and Financing Strategy

The Morena Boulevard Station Area Planning Study identifies a variety of specific infrastructure improvements that will be necessary to facilitate development within the project area. This strategy identifies funding and financing sources for capital improvements needed to support the Plan. The following addresses one of the fundamental decisions relating to implementation, which is the general approach to paying for infrastructure improvements.

7.4.1 "Funding" Versus "Financing"

The term "funding" refers to a revenue stream—whether from a tax, fee, grant, or other revenue source that generates money to pay for an improvement. "Financing" or "debt financing" refers to the mechanisms used to manipulate available revenue streams, so that agencies are able to provide infrastructure immediately, before revenue equal to the full cost of that infrastructure is available.

Typically, financing involves borrowing from future revenues by issuing bonds or other debt instruments that are paid back over time through taxes or fee payments. Although the terms funding and financing are often used interchangeably, the distinction is important because financing mechanisms almost always require that a funding source be identified to pay off the debt. For example, the land-based or district financing tools discussed below typically establish a new district-wide tax or fee that is used to pay back bondholders.

7.4.2 Potential Funding Sources and Financing Mechanisms

This section provides an overview of funding sources and financing mechanisms for the types of improvements included in the Plan. They are organized into the following four categories: development/project-related improvement costs, improvement or benefit districts, grants or loans, other funding sources.

Development/Project-Related Improvement Costs

The volume of anticipated residential development in the plan area will likely require developers to improve infrastructure facilities (e.g., roadways, and water, sewer, and drainage facilities) to meet anticipated future demand. These improvements can be reimbursed through existing City or other financing programs that are developed in conjunction with the implementation of the plan. Developers may be expected to absorb the cost associated with constructing and maintaining some public facilities (e.g., parks) and streetscapes, and may be required to pay impact fees for the construction of off-site public parking facilities.

Update Existing Development Impact Fee Programs

The City may want to look into updating its existing development impact fee programs. These pertain to city administration, fire, park, and police facilities, and IT, trails, traffic, and wastewater facilities. These programs can be increased incrementally to help fund the impacts associated with expected new development, including major cost items in the project area that provide citywide benefit.

Plan Area Development Impact Fee

The City could enact a special development impact fee for the plan area to help fund infrastructure upgrades in the area. This fee would need to be adopted in accordance with California's Mitigation Fee Act (Government Code Section 66000 et seq.). Creation of a "nexus" study would demonstrate the relationship between the infrastructure items funded and the new development, and calculate the appropriate fee amount on various categories of development.

Development impact fees and tax districts can help support community parks and open space

Development Agreements, Dedications, or Exactions

The City could negotiate direct contracts with developers for financial commitments, dedications, or cash contributions beyond those that could be justified through typical subdivision ordinance dedications and exactions or impact fees. The use of development agreements offers a mechanism for expanding funding potential and creating financing packages suited to the needs of the individual projects.

Developer Agreements

This is an agreement between City and developer describing the improvements and funding sources available to finance improvements. It is typically used in conjunction with other financing programs such as improvement districts and benefit zones (see below).

Land-Based or District Financing – Improvement or Benefit Districts

In California, the most commonly used land-based financing tools have included the formation of benefit assessment districts, community facilities districts, and tax increment financing districts. With the elimination of redevelopment agencies in California at the end of 2011, a similar tool, infrastructure financing districts, may serve as an alternative to tax increment financing. It is important to note that many of these district financing tools depend on new real estate development to generate assessments or property tax revenues to finance the improvements.

Benefit Assessment Districts

In a special assessment district, property owners within the district agree to pay an additional fee or tax in order to fund an improvement within a specific geographic area. The amount that each property owner pays must be proportional to the benefit the property will receive from the proposed improvement. Assessment districts are established by a majority vote of the property owners and can include a variety of different types of districts, from business improvement districts to sewer, utility, and parking districts.

Community Facilities Districts

Like benefit assessment districts, Mello-Roos community facilities districts (CFDs) are formed when the property owners in a geographical area agree to impose a tax or fee on the land in order to fund infrastructure improvements. Unlike benefit assessment districts, however, CFDs are most commonly formed in cases where the geographic area encompasses a small number of property owners who intend to subdivide the land for sale. This is because, to be enacted, CFDs require a two-thirds vote of property owners, unless there are at least 12 registered voters within the proposed district, in which case the district must be approved by a two-thirds majority in an election of registered voters.

Infrastructure Financing Districts

Infrastructure financing districts (IFDs) use a property tax increment to pay for infrastructure improvements. New tax revenues are diverted to finance improvements, but IFDs cannot divert property tax increment revenues from schools. Under existing California law, a city or county may create infrastructure financing districts by ordinance, if a two-thirds majority of the voters in the proposed district approves the IFD.

Special Tax Districts

The City may be interested in establishing a special tax district to help fund services such as public safety; streets and street lighting; landscaping, parks, and open space; and storm drains and flood control. To fund these services, new residential subdivisions or multi-family developments would have the option to annex to the district or provide funding to cover the cost of providing these services in some other manner.

Financing District

These districts are established by public agencies to provide revenue for annual maintenance of municipal services. It provides a revenue stream to annually maintain parks, open space, and street lighting and fund various improvements and activities within the plan area (or selected districts).

Grants or Loans

Community Development Block Grant

The Community Development Block Grant provides federal funding from the Department of Housing and Urban Development to support development of urban communities with a primary focus on low-income residents. Funds can be used for building rehabilitation, infrastructure, services (e.g., assistance to businesses that create jobs for low-income individuals) and affordable housing development costs (generally excluding construction costs of new housing).

State and Federal Transportation Grants

Major federal funding sources for transportation infrastructure are administered by Caltrans and can be used for a wide variety of transportation-related infrastructure projects, from bike paths to major road improvements. However, these funds can only be used on functionally classified collectors and arterials.

HOME Grants

HOME provides formula grants to states and localities that communities use, often in partnership with local nonprofit groups, to fund a wide range of activities that build, buy, and/or rehabilitate affordable housing for rent or homeownership or provide direct rental assistance to low-income people. HOME is the largest federal block grant to state and local governments designed exclusively to create affordable housing for low-income households. Each year it allocates approximately $2 billion among the states and hundreds of localities nationwide.

HOME funds are awarded annually as formula grants to participating jurisdictions. HUD establishes HOME Investment Trust Funds for each grantee, providing a line of credit that the jurisdiction may draw upon as needed. The program's flexibility allows states and local governments to use HOME funds for grants, direct loans, loan guarantees or other forms of credit enhancement, or rental assistance or security deposits. This type of grant could best be used in the city for possible affordable housing units within mixed-used buildings. These funds will also have to be used for low- to moderate-income persons. For more information, visit www.hud.gov

Proposition 84 – Storm Water Grant Program

The Prop 84 – Storm Water Grant Program provides matching grants to local public agencies for the reduction and prevention of storm water contamination of rivers, lakes, and streams. Grants may be awarded for projects to assist in implementing low-impact development and other onsite and regional practices, on public and private lands, that seek to maintain predevelopment hydrology for existing and new development and redevelopment projects.

Federal Congestion Mitigation and Air Quality (CMAQ) Improvement Program

CMAQ provides one-time capital funding for projects that contribute to air quality improvements and reduce congestion. The City's Park-and-Ride parking lot was built with a CMAQ grant. For more information, visit www.fhwa.dot.gov/environment/air_quality/cmaq/

Proposition 40 – The California Clean Water, Clean Air, Safe Neighborhood Parks and Coastal Protection Act

Approved by voters in 2002, Proposition 40, the California Clean Water, Clean Air, Safe Neighborhood Parks and Coastal Protection Act, funds a number of per-capita and competitive park grant programs. The intent of the act is to (1) acquire and develop properties of the state park system; (2) acquire and develop neighborhood, community and regional parks, and recreational areas for land, air, and water conservation programs, including acquisition for those purposes; and (3) acquire, restore, preserve, and interpret California's historical and cultural resources.

Proposition 40 and the Roberti-Z'Berg-Harris Urbanized Area Need-Basis grants would support the development of community benefits including neighborhood parks

Roberti-Z'Berg-Harris Urbanized Area Need-Basis Grants

The Roberti-Z'Berg-Harris Urbanized Area Need-Basis Program is a competitive grant program which is intended to meet the urgent need for safe, open, and accessible local park and recreational facilities for increased recreational opportunities that provide positive alternatives to social problems.

California Economic Development Lending Initiative Loans

The California Economic Development Lending Initiative provides partial loan funds for equipment purchase, permanent working capital, business acquisition, lease hold improvements, financing accounts receivable, and inventory. These funds are often administered by a local economic development corporation or the lending institution financing a new development.

Federal Loan Programs

Federal loan programs, such as the US Small Business Administration, assist small businesses with a range of short- and long-term capital needs and could help plan area business owners purchase and improve properties for new retail uses.

Loan Guarantee Programs (e.g., SAFE-BIDCO)

Created by the legislature, the SAFE-BIDCO is a non-deposit lender operating several state and federal loan and guarantee programs that can assist all types of small businesses at various stages of development. SAFE-BIDCO acts as a catalyst for economic development by making funds available that a normal commercial lender would not provide.

Other Funding Sources

General Fund Transfers

While the City can choose to appropriate General Fund monies to downtown projects as its budget allows, two General Fund revenue sources will be directly affected by downtown development and may warrant special consideration as potential funding mechanisms. Both sales tax and property tax generated in the project area are likely to increase as the retail market improves and property values rise. At the discretion of the City Council, new plan area sales tax or property tax revenues could be dedicated toward downtown infrastructure improvements and special programs.

California Seismic Bond Act

The California Seismic Bond Act provides a 15-year property tax break for seismic improvements to unreinforced masonry buildings or buildings identified by local government as being hazardous to life during an earthquake. To determine which buildings might qualify for this program, a study will need to be completed.

Statewide Community Infrastructure Program

California Communities offers the Statewide Community Infrastructure Program (SCIP), a financing program that enables developers to pay most impact fees (excluding school fees) and finance public improvements through an acquisition agreement that qualifies under the 1913/1915 Act via tax-exempt bond issuance proceeds. Since 2003 the SCIP program has assisted communities and developers throughout California to finance more than $140 million in impact fees. This program has been molded to the needs of each local agency participant of SCIP. Because most local agencies require developers to pay impact fees before obtaining a permit, SCIP can be used to directly prepay these fees or, alternatively, to reimburse the developer after fee payment. The program can be used to enable developers to pay for or be reimbursed for all eligible impact fees or for a single impact fee. Moreover, the program may alleviate the need for a fee deferral program by providing the local agency with necessary funds and eliminating the risk of nonpayment by the developer. These funds are then repaid on a property tax assessment.

Safe Routes to School

The state legislature and the administration (Caltrans, Business Transportation and Housing, and the governor's office) will be considering proposals for how to spend $3.5 billion each year in federal transportation act funds from the law MAP-21, Moving Ahead for Progress in the 21st century passed by Congress in July 2012. Beginning in October 2012, Safe Routes to School activities will be eligible to compete for funding alongside other programs, including the Transportation Enhancements program and Recreational Trails program, as part of a new program called Transportation Alternatives.

Safe Routes to School program funds can help support development of addition dedicated bike lanes to educational facilities

Transportation Development Act

The Transportation Development Act (TDA) of 1971 states that one-quarter cent of the retail sales tax is returned to the county of origin for the purpose of funding transportation improvements in that county and allows regional transportation planning agencies to earmark 2 percent of the Local Transportation Fund (LTF) for bicycle and pedestrian facilities. The TDA provides two major sources of funding for public transportation: the LTF and the State Transit Assistance fund. These funds are for the development and support of public transportation needs that exist in California and are allocated to areas of each county based on population, taxable sales, and transit performance. Some counties have the option of using LTF for local streets and roads projects, if they can show there are no unmet transit needs.

Bicycle Transportation Account

The Bicycle Transportation Account (BTA) is an annual program providing state funds for city and county projects that improve safety and convenience for bicycle commuters. In accordance with the Streets and Highways Code (SHC) Section 890-894.2 - California Bicycle Transportation Act, projects must be designed and developed to achieve the functional commuting needs and physical safety of all bicyclists. Local agencies first establish eligibility by preparing and adopting a Bicycle Transportation Plan (BTP) that complies with SHC Section 891.2. The BTP must be approved by the local agency's regional transportation planning agency. Caltrans anticipates appropriation of $7.2 million annually for projects that improve safety and convenience for bicycle commuters. SHC Section 2106 stipulates the annual BTA funding level in the approved state budget, with awards announced after enactment. Per SHC 891.4(b), funds are allocated to cities and counties on a matching basis that requires the applicant to furnish a minimum of 10 percent of the total project cost. No applicant shall receive more than 25 percent of the total amount transferred to the BTA in a single fiscal year.

Bicycle Transportation Account funding can further help improve the bicycle facilities throughout the plan area in support of the local and regional bike community

State Revolving Fund (SRF)

The Federal Water Pollution Control Act (Clean Water Act), as amended in 1987, established the Clean Water State Revolving Fund (CWSRF) program. The CWSRF program offers low-interest financing agreements for water quality projects. Annually, the program disburses between $200 and $300 million to eligible projects.

Other resources to further flush out/research for Morena Boulevard in Phase 2:

- Public/private partnerships
- Specials Districts whether Joint Powers Authority (JPA) or Infrastructure Financing Districts (IFD, currently req. 2/3 vote)
- Long Range Property Management Plan for former RDA's
- COP Bonds: Line of Credit without a vote of the people
- Revenue sharing
- Parking authorities - Charge revenue and be landlord
- New Go Biz State programs
- CDBG funds (see SR plan)
- Tax sharing agreements
- Infrastructure financing District
- Enterprise Zone

7.4.3 Possible Development Incentives

- CEQA Streamlining
- Reciprocal access agreements
- Parking reductions
- Pre-marketing packets (property stats including zoning, infrastructure, standards, and surrounding demographics)
- Developer “concierge” services/ombudsman (one point of contract to “fast track” their requests)
- GoBiz Governor’s business development tool to help attract business to the area
- State has added legislation for tax exemption for manufacturing equipment
- Land use and zoning powers
- Density Bonuses: See City’s Affordable Housing Density Bonus Regulations - effective outside of the Coastal Overlay Zone on December 20, 2007
- Implement: Transit pass programs for employees in lieu of building additional parking; Parking cash-out for employees; Market pricing of curb parking and off-street parking.

7.5 Project Phasing

Recommendation to develop an implementation matrix such as the table outlined below to identify all improvements necessary for plan implementation. Once complete a "financing" column could be added to identify which funding mechanisms are most appropriate for funding each type of improvement/action.

Sample Implementation Action Plan

Implementation Action	Cost Estimate (where applicable)	Priority	Responsibility	
			Lead	Support
LAND USE REGULATION OR POLICY (LU)				
ECONOMIC DEVELOPMENT (ED)				
CIRCULATION (C)				
PUBLIC IMPROVEMENTS (P)				
FUNDING PROGRAMS (F)				