Background Report

Chapter Contents

1 Introduction

Campo Road Corridor Revitalization Specific Plan (Specific Plan) is a community-based plan to improve the urban form, quality of life, and public safety along the Campo Road Commercial Corridor (Corridor). The County of San Diego initiated the plan with a grant from the San Diego Association of Governments (SANDAG) to further smart growth principles by creating a vibrant and accessible community center in the heart of East County.

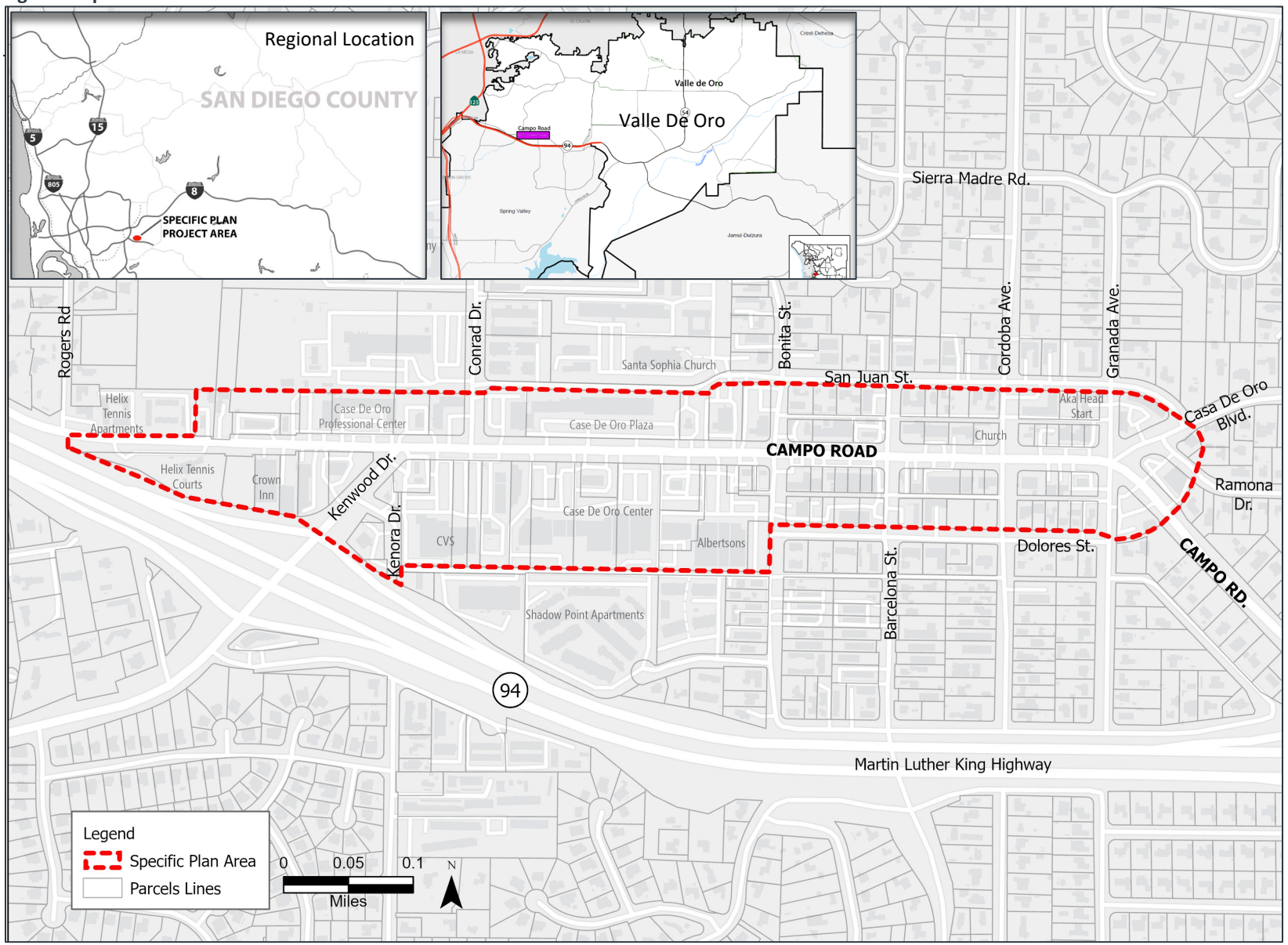
The Specific Plan covers a 63-acre area (42 acres excluding roads and rights-of-way) centered on Campo Road between Rogers Road and Granada Avenue and serves as the commercial and civic center of the Casa de Oro community. The Specific Plan area primarily encompasses the commercial area extending one block north and south of Campo Road (**Figure 1)**. The Corridor is located within the Valle de Oro Community Plan Area, which includes the communities of Casa de Oro, Mount Helix, and Rancho San Diego.

2 Community History and Context

The Casa de Oro and Mount Helix areas were home to the Kumeyaay people. After Spanish missionaries arrived in the region and Mexican independence in 1810, the area was used for farming and livestock grazing. The community developed gradually from its agricultural roots, substantially beginning in 1928 when Campo Road was first paved. In 1930, John Cornelius subdivided "Casa de Oro Avocado Estates," giving the area its name. With new traffic and residents, commercial business activity developed to serve the immediate area.

Today, Casa de Oro has a full range of uses and amenities in a relatively compact area. From large-lot single-family residential to high-density apartments, a variety of housing types provide a range of living options for a diversity of family types and sizes. The Campo Road Commercial Corridor features community-serving retail and dining, professional services, and civic uses, including a library. Santa Sophia church, Estrella Park, and sheriff's substation. Spring Valley Academy is adjacent to the Corridor, and Casa de Oro Elementary and College Preparatory Middle School serve the larger neighborhood.

Figure 1: Specific Plan Area



Casa de Oro experienced a housing boom in the 1950s and 1960s, as many service members and their families settled in San Diego following World War II. Casa de Oro Elementary was built in 1948, providing a new civic institution for the burgeoning population. Despite the growth in nearby communities, Casa de Oro remained largely agricultural until the completion of State Route 94 in 1970, which cemented Casa de Oro as an activity center in the East County region.

Over time, the Corridor became a focus for business and commerce within the area, including the Spring Valley community (which remained a part of the Valle de Oro Planning Area until 1989). The County Board of Supervisors accepted the Community Planning Group in 1972. To guide the future development of the Valle de Oro community, including the Corridor, the Valle de Oro Community Plan was adopted in 1977.

Casa de Oro was known for being a healthy business district and the annual parade. Many families that built homes and raised families in the 1960s still remain. Over time, larger, more modern regional shopping centers were developed on the outskirts of the community and became the preferred shopping and service centers. Such competition led to a slow decline and a general lack of investment over time.

Although the area retains a mixture of independent and national retail chains, the area has experienced lower lease rates and rents, property values, and a decline in occupancy rates. To reverse such trends, concerned residents banded together, forming Casa de Oro Alliance (CDOA) in 2015 and began a series of efforts to enhance the area. The CDOA is a nonprofit organization focused on revitalizing Casa de Oro. The attention to this area was brought to the supervisors by the CDOA, and in October 2017, the County of San Diego initiated a comprehensive planning process for the Corridor to revitalize the Corridor to create a place of social, economic, and civic activity for the surrounding communities.

Figure 2: Casa de Oro 1950s

Source: Stephen McMeeken, Pinterest

3 Planning Process and Community Engagement

The Casa de Oro planning process spans three phases (referred to as Specific Plan Phases), leading to the Specific Plan preparation. These Specific Plan phases are described below.

Specific Plan Phase 1: Existing Conditions and Key Issues and Opportunities (2017-2018)

On September 27, 2017, the County of San Diego Board of Supervisors directed the County's Department of Planning & Development Services (PDS) to initiate an effort toward developing a comprehensive revitalization plan that would enrich and beautify the Casa de Oro area. The Specific Plan objective was to identify issues (See **Figure 3**) and opportunities within the Casa de Oro study area and engage the community in the process.

The effort was focused on understanding the community's needs, issues, and opportunities and assessed the value to the community of preparing a Specific Plan. It also included determining the best methods and tools to achieve the community's goals and objectives for the Corridor.

Community engagement played a vital role in understanding the potential to revitalize Casa de Oro and gain consensus on the key issues and needs of the local community.

Specific Plan Phase 1 community engagement efforts involved the following:

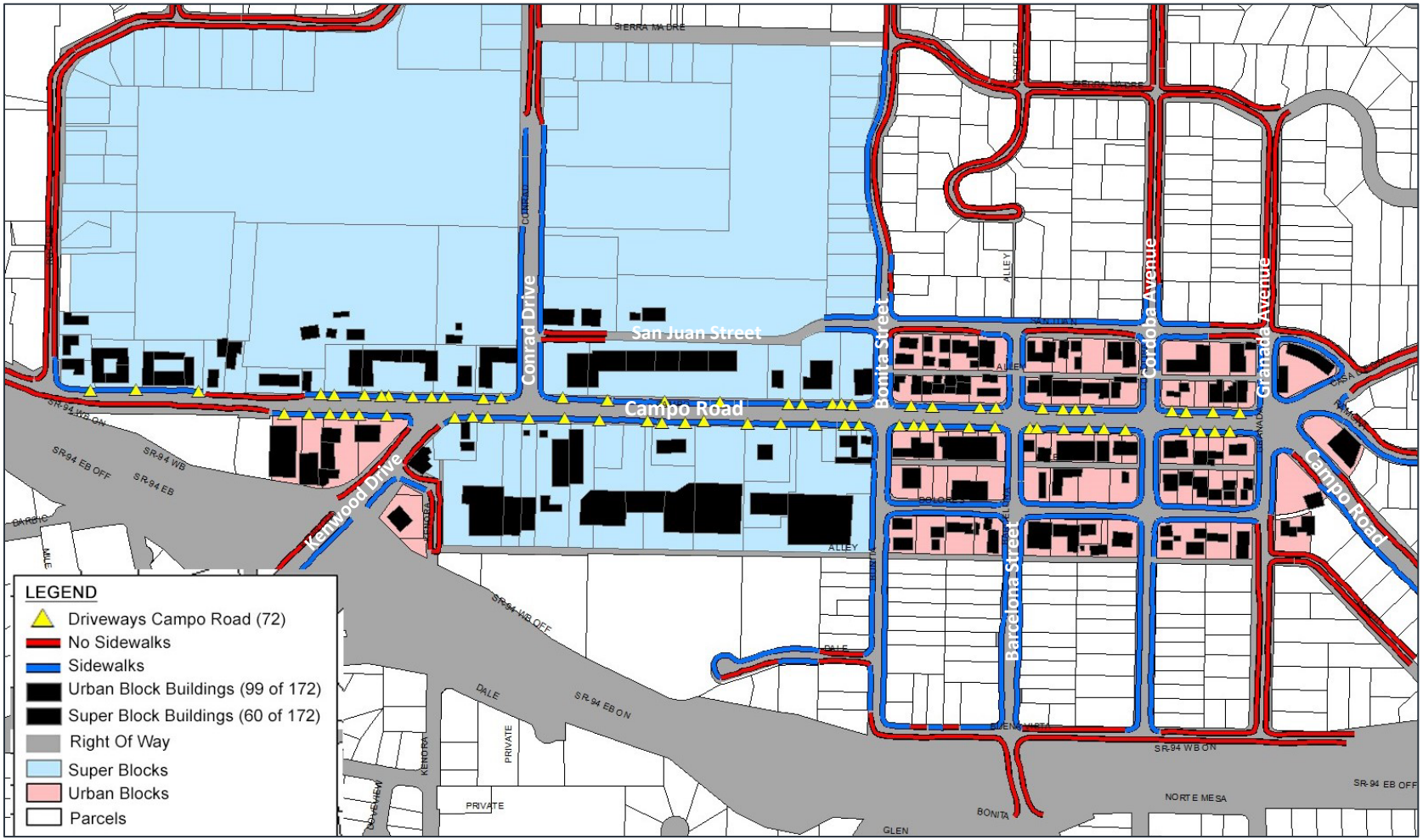
- **Site Visit** – The team led a site visit with Casa de Oro Alliance members for an on-the-ground discussion of existing issues and opportunities. Maps were prepared and provided to each participant to note existing conditions, concerns, and ideas.
- **In-Person Surveys and Questionnaires** The team hosted a two-day series of stakeholder interviews with community members in and around the Casa de Oro study area. The stakeholder interviews intended to seek and collect input from local residents, property and business owners, school representatives, and all interested community members from along and immediately around the Campo Road area to discuss issues and concerns. Interviews focused on issues and ideas concerning land use, design, safety, traffic/parking, landscaping, and other topics. These are documented in Appendix A.
- **Community Planning Group (CPG) Meetings** – Study findings and potential revitalization tools and options were discussed over three meetings with Valle de Oro and Spring Valley CPGs in November 2017 and January 2018.
- **Community Workshop** – A community workshop was conducted in December 2017. It included a presentation and project overview, highlights of land use and urban form analysis, and presentation of five potential planning options to consider as the next steps in the Specific Plan. The presentation was followed by hour-long focused group discussions of specific issues and opportunities and recommendations around four sub-areas of the Corridor. At the end of the breakout session, each of the four groups presented their results to the entire group. The workshop also included a large wall map of the entire Corridor to which attendees attached coded issue stickers to identify issues, opportunities, and recommendations.

Community input and recommendations during Specific Plan Phase 1 led to the conclusion that developing a Specific Plan and implementing form-based code were the appropriate regulatory tools to revitalize the Corridor. The issues and recommendations were documented in the Revitalization Strategy Plan and Issues and Opportunities Report.

Pursuant to Government Code Sections 65450 to 65457, a local government may adopt specific plans specifying the extent, intensity, land uses, and supporting

infrastructure in a given area. Specific plans may be adopted by resolution or ordinance and may be amended as often as necessary. While specific plans may create custom and limited land use for a particular area, they are required to be consistent with the jurisdiction's general plan—in this case, the County of San Diego General Plan.

Figure 3: Specific Plan Phase 1- Issues and Existing Conditions Documentation



Source: Revitalization Strategy Plan and Issues and Opportunities Report

Specific Plan Phase 2: Technical Analysis and Community Visioning (2019-2020)

Specific Plan Phase 2 began in November 2019, with the project team setting up an informational booth at the 2019 Annual Casa de Oro Fall Festival at Spring Valley Academy (see **Figure 4**). The booth included informational resources and exercises. Over the course of the day, an estimated 200 people stopped by to ask questions, provide thoughts, take part in the interactive exercises, and review the available materials.

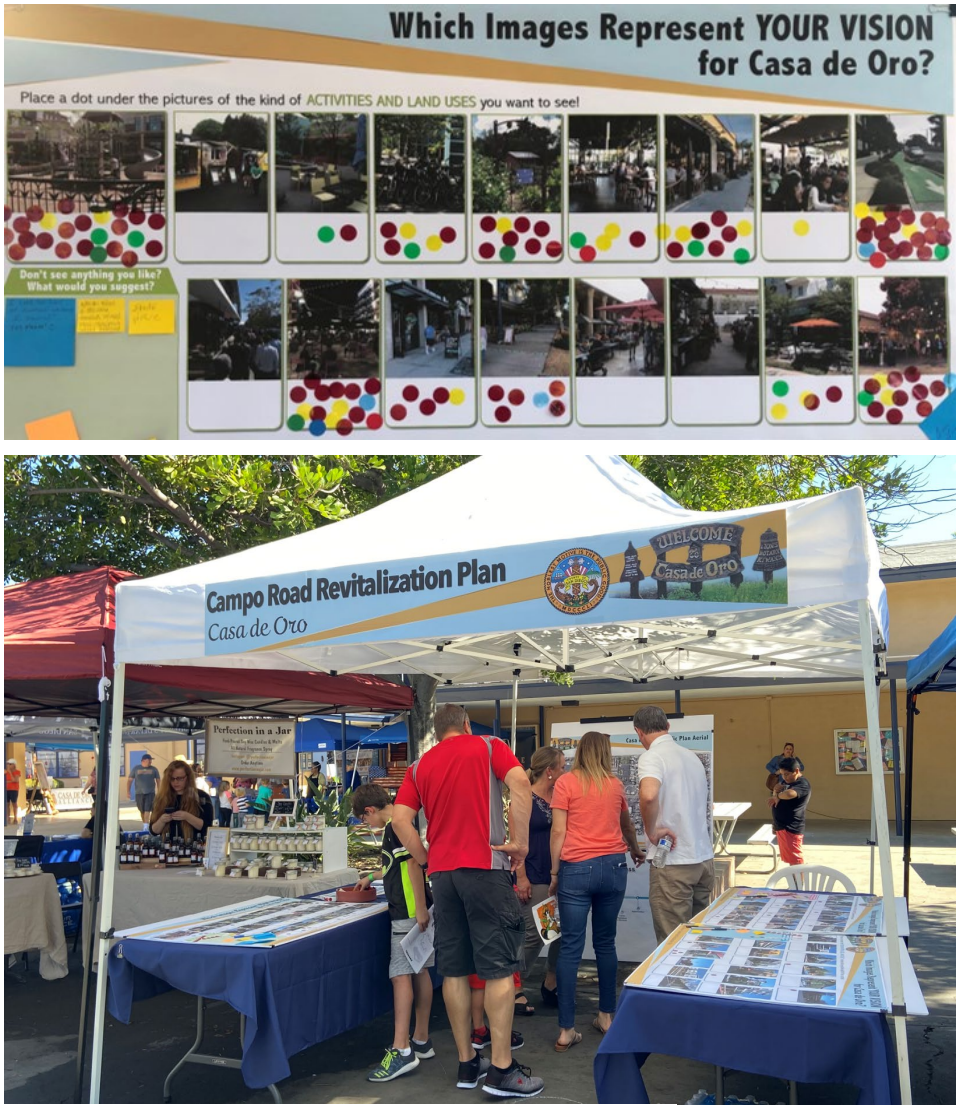
A visioning exercise was facilitated with approximately 25 seventh and eighth graders at Spring Valley Academy. The exercise consisted of activities where the students worked in groups of four and used random objects (e.g., pipe cleaners, broken toy parts, buttons) to design and express their visions for a better Casa de Oro. Each team then described its design. The summary of results can be found in Appendix A.

In February 2020, the Casa de Oro Specific Plan team held a community visioning workshop in the cafeteria of the Spring Valley Academy. Numerous stakeholders from the community attended the workshop—34 individuals signed the interest list, although more than 34 were in attendance.

The team led attendees through an interactive Post-It Note visioning exercise where each attendee individually responded to a series of three "big idea" questions:

- What are the treasures of Casa de Oro? What do you love? What are its best assets?
- What are the challenges in Casa de Oro? What are the obstacles and issues that need to be addressed?
- What are your visions for the future of Casa de Oro? What do you hope the community looks and feels like in 5, 10, 20 years? What will be here?

Figure 4: Specific Plan Phase 2- Displays at the 2019 Annual Casa de Oro Fall Festival



Source: Michael Baker International

Figure 5: Specific Plan Phase 2- Images from February 2020 Community Visioning Workshop

Source: Google Earth- City of Encinitas and City of San Diego

The notes were aggregated by topic and summarized with the group (refer to Appendix A). The attendees then broke into focus groups to discuss the main topics from the prior exercise. Each group then reported its findings and recommendations.

Such outreach efforts were supplemented by preparation of technical analyses, which included a detailed review of the existing conditions within the Corridor study area; a market feasibility assessment; a traffic analysis and parking resource and utilization study; and a review of existing zoning regulations, infrastructure, demographics, and other constraints that may affect future development within the Corridor.

Traffic analysis and parking resource and utilization study were prepared in 2019 for the study area prior to the COVID-19 pandemic. Traffic volumes and parking were evaluated in December 2019 to assess existing conditions and operations. The analysis determined that all roadway segments within the study area (Campo Road between Granada Avenue and Rogers Road) operate at an acceptable level of service (LOS). In addition, approximately 50 percent of the study intersections operate at an acceptable level LOS during one or both peak hours. The technical study is available in Appendix B. The assessment also documented the physical roadway conditions and intersection operations as well as the pedestrian, bicycle, and transit facilities within the study area. Additionally, the parking resource and utilization study determined that parking utilization was an estimated 50 percent of available spaces during the peak parking demand hour (2:00 p.m.). This is documented in Appendix C.

A market feasibility assessment was conducted in 2020, which established the building use and construction types that are likely to be profitable and attract development (refer to Appendix D). In addition, the assessment considered demographic trends, recent development patterns in comparable locations, and potential market demand for new multi-family and commercial uses within the Corridor. The assessment concluded that, due to prevailing acquisition costs for vacant land and "teardown" sites, most of the multi-family/mixed-use scenarios considered would not be feasible in the near to mid-term. Generally, the residual land values (the amount the developer is able to pay for the land) supported by the development scenarios considered for the Specific Plan area would not exceed the potential costs to acquire land and demolish existing older commercial buildings that may exist. However, it was noted that further analysis is required to identify specific commercial buildings within the study area that

may be optimum for future multi-family or mixed-use redevelopment.

Existing utilities and infrastructure serving the Corridor were also evaluated and summarized in an Existing Conditions Analysis in January 2020 (available in Appendix E). It was determined that the Specific Plan area is currently served by two water mains located along Campo Road. In addition, the existing water infrastructure system has adequate capacity and pressure (i.e., for fire suppression purposes) to serve the anticipated future expansion of commercial and residential uses in the Corridor. Therefore, water service capacity and pressure do not appear to be constraints on future growth or development.

Additionally, the evaluation determined that the existing sewer main under Campo Road serving the Specific Plan area is likely overcapacity and would need to be upsized. The existing wastewater system is planned for repair and upgrades in the near term; however, further study is needed to determine whether the planned improvements can accommodate both existing and significant new future development or if additional upgrades or expansion would be required.

Existing stormwater facilities are present along the Corridor and vary in age and condition. Such facilities may represent a potential physical or monetary constraint to future development if relocation is required. However, it is anticipated that future development would result in a decrease in impervious surface area (i.e., surface parking lots) within the Corridor, thereby decreasing stormwater runoff through the incorporation of landscaping, stormwater detention basins, and other such features.

Additionally, it was determined that a high-pressure gas line operated by San Diego Gas & Electric (SDG&E) runs directly under Campo Road. The transmission pipeline represents a significant constraint, as a high-pressure gas transmission pipeline would generally be difficult and resource-intensive to relocate. Further review is recommended to identify the precise location of the pipeline within Campo Road when considering the future development of the Corridor.

Specific Plan Phase 2 concluded with an in-person community visioning workshop in February 2020. The visioning workshop offered area residents and business owners the opportunity to identify and share their opinions of their favorite elements, areas, and characteristics of Casa de Oro that may be improved upon and express their vision for the future of the Corridor.

Each attendee individually responded to a series of three "big idea" questions:

- What are the treasures of Casa de Oro? What do you love? What are its best assets?
- What are the challenges in Casa de Oro? What are the obstacles and issues that need to be addressed?
- What are your visions for the future of Casa de Oro? What do you hope the community looks and feels like in 5, 10, 20 years? What will be here?

Key challenges for the area were identified as issues related to traffic/circulation, land use types, overall aesthetics/design, homelessness, cleanliness, crime, and lack of identity. Visions for the future included opportunities for arts and cultural events; improved mobility/walkability; streetscape and landscaping; enhanced land use opportunities; community spaces/parks; improved aesthetics/design; opportunities for restaurants and outdoor dining; enhanced sense of identity; and a new library.

Input from the participants was documented for further consideration and for reference purposes in formulating the Specific Plan elements that would provide guidance for future development within the Corridor and achieve the intended vision. Refer to Appendix A for documentation of the results of the community visioning workshop.

With consideration for the public input received, development options from nearby communities and detailed design concepts were presented at a subsequent virtual community workshop and community preference survey held in December 2020. The webinar featured a presentation and live interactive polls, allowing participants to rank their preferences for different design options and identify specific attributes/features that they supported or disliked. The same survey was posted online, allowing community members who could not join the live webinar to contribute and those who participated in the webinar to add more detailed comments about their design preferences. Key input was received on the appropriateness of multi-storied, mixed-use

development along Campo Road; preference for types of mixed-use buildings, and use of incentives (i.e., reduced parking requirements, additional building height, additional floor area) to facilitate the development of community spaces and/or other community benefits; street parking, sidewalks, and bike lane options; and entry monument and gateway elements.

The poll results and comments were discussed and posted on the County website to review them; refer to Appendix A, which provides a summary of the polling results received at the workshop. After the workshop, an online feedback form was made available for those who wanted to provide additional feedback or were not able to attend the presentation. A recorded presentation was also provided. The input received was considered in refining the goals, objectives, and development standards identified in the Specific Plan.

Specific Plan Phase 3: Specific Plan Development and Community Engagement (2020-2022)

The community feedback obtained during Specific Plan Phases 1 and 2 was synthesized into an action plan for completing the Specific Plan. Additionally, public input obtained during Specific Plan Phases 1 and 2 was incorporated into the County-maintained website for the project to ensure ease of access to the data collected and enable public understanding of the key issues and concerns identified by community members and the interested public for the Corridor. Refer to Appendix A for relevant summaries of public input received during the community outreach and engagement process.

Figure 6: Specific Plan Phase 2- Community Workshop

Source: Michael Baker International

The County hosted a virtual interactive community workshop in October 2020 to build upon the design preferences communicated via the community feedback received in Specific Plan Phases 1 and 2 and to develop the community's vision further and guiding principles for the Specific Plan. Community members provided feedback during the presentation and had the opportunity to submit detailed comments using a dedicated online feedback form. Key issues of interest identified included gateways and streetscape; trees and landscaping; community gathering space; arts and culture; and design regulations to guide future development. Based on the information received, design alternatives and land use concepts were further developed to illustrate better how the community vision would be realized.

Input gained from community members during the October 2020 webinar and December 2020 workshop and survey was shared with Valle de Oro CPG members in April 2021 at a webinar presentation. The survey results were summarized, and preferences were shared to provide the CPG with an understanding of the community's desires and vision for the future development of the Corridor.

Building upon the community and stakeholder input received, technical research undertaken, and other data gathered, a draft of the Specific Plan was prepared and released to the public for review and comment in XXXX 2021. A community workshop was also held in XXXX 2021 to discuss further the document and additional input on the overall concepts, design guidelines and regulations, implementation

strategies, and other Specific Plan elements (*discussion to be expanded as appropriate*).

Additionally, County staff continued to meet with the Casa de Oro Alliance during the Specific Plan development to allow for focused, informative discussions on key issues and concerns.

In conformance with the California Environmental Quality Act (CEQA) Guidelines Sections 15162 and 15164, an Addendum to the County General Plan Final Environmental Impact Report (EIR) was prepared to evaluate whether significant environmental effects may potentially result with implementation of the Specific Plan. Refer to the Consistency with Relevant Plans and Regulations section for further discussion.

[ADD text after remaining outreach and public hearings]

Figure 7: Specific Plan Phase 3- December 2020 Community Workshop

Source: Michael Baker International

4 Consistency with Relevant Plans and Regulations

This section discusses the consistency of the Specific Plan with relevant plans such as the San Diego County General Plan, Valle de Oro Community Plan, County Active Transportation Plan, SANDAG Smart Growth Opportunity Map, and SANDAG Regional Transportation Plan (RTP). It also discusses consistency with regulations such as the County of San Diego Zoning Ordinance and CEQA Regulations.

4.1 County of San Diego General Plan

The Role of the Corridor as a Village

As identified in the San Diego County General Plan Land Use Element, much of the Valle de Oro and Spring Valley communities are designated with the Regional category of "Village," including the land area affected by the Corridor. Villages are intended to accommodate the "highest intensities and the greatest mix of uses" (General Plan Land Use Element).

Figure 8 shows that lands located directly on Campo Road are currently designated as General Commercial (C-1). The General Commercial (C-1) designation represents one of the County's higher intensity land use categories, with a floor area ratio (FAR) designation of 0.7, and allows for a greater potential mix of land uses. As the FAR represents the ratio of the amount of floor area as compared to the lot or parcel area upon which it is located, an increase in FAR represents a potential for intensification of use on a particular property. The General Plan allows for potential increases in the FAR at the Community Plan level. However, this Specific Plan will allow for changes to the existing FAR to enable an increase in the intensity of future land uses within the Corridor.

As shown in **Figure 8**, lands in the vicinity of the Specific Plan area currently have a General Plan land use designation of Village Residential, 24 dwelling units/acre (du/ac); Village Residential, 4.3 du/ac; and Limited Impact Industrial. Such lands designated as Village represent the opportunity for future development to occur at a higher intensity, with a variety of land uses being accommodated. The Specific Plan does not propose to change the existing densities allowed within the Corridor as compared to that under existing conditions. However, incentives would be available that would allow future development to occur at a higher density if desired (i.e., local and state density bonus programs).

The Specific Plan is wholly consistent with the County's vision of concentrating growth in existing urbanized communities in the westernmost areas of the unincorporated area. The Specific Plan would be implemented in alignment with the General Plan and would assist the County in achieving the goal of concentrating new housing and commercial growth in areas with high access to public transit, services, and amenities. Further, design measures identified in the Specific Plan provide guidance for future development, allowing for a mixture of new and enhanced businesses and housing along the established Corridor. The Specific Plan also identifies opportunities to address infrastructure and circulation deficiencies through the provision of adequate roadways, streetscape enhancements (e.g., planting of street trees), and equality in public circulation and access (i.e., Americans with Disabilities Act [ADA] compliance).

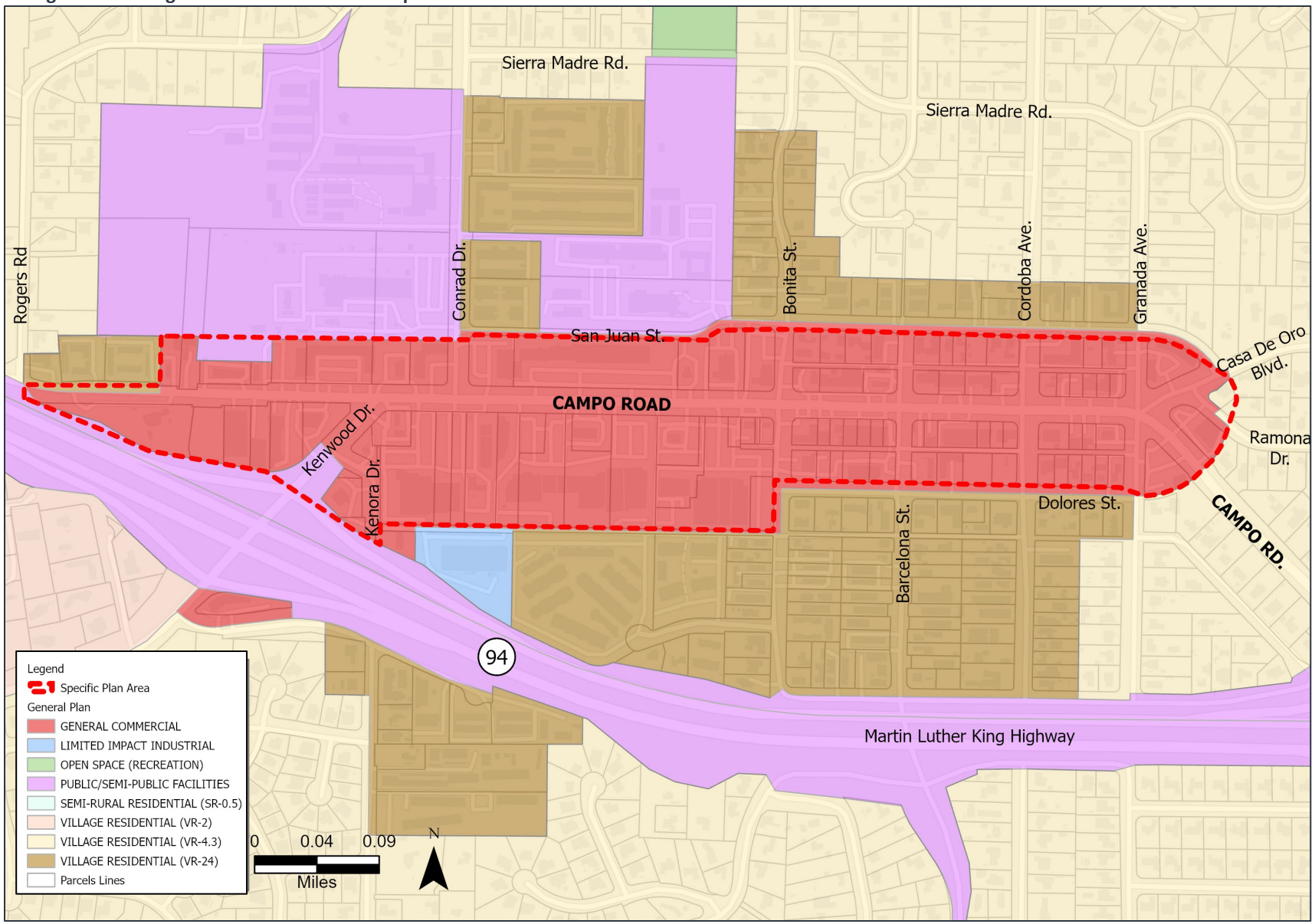
The Corridor as a Transportation Asset

The Mobility Element of the County's General Plan identifies Campo Road (see #6 on **Figure 9**) as a Boulevard Series Road. Boulevards are four-lane "roadways with a lower design speed and a wider parkway that should be used in Villages or similar locations where higher traffic volumes are combined with on-street parking, pedestrian, bicycle, and transit activities."

As a part of the Specific Plan, it is recommended that this segment of Campo Road be redesignated as a Minor Collector, which is appropriate for "areas within a Village with heavy non-motorized circulation and transit activities" (Mobility Element, p. 4-9). The Minor Collector designation is suitable for Villages and consistent with the Mobility Element's goals and policies to provide safe and efficient road networks that prioritize travel within community planning areas (policy M-1.1).

The reconfigured Campo Road also implements policy M-4.1, which encourages walkable, multimodal roads in Villages and compact residential areas.

Figure 8: Existing General Plan Land Use Map



Source: San Diego County General Plan, ESRI, Michael Baker International

4.2 Valle de Oro Community Plan

The Valle de Oro Community Plan (Community Plan) was adopted in 1977 and last updated in 2011. The Community Plan covers the areas of Casa de Oro, Mount Helix, and Rancho San Diego. The Community Plan establishes the framework for development within the Valle de Oro Community Plan area and identifies goals, policies, and recommendations to guide future growth. Specifically, the Community Plan envisions:

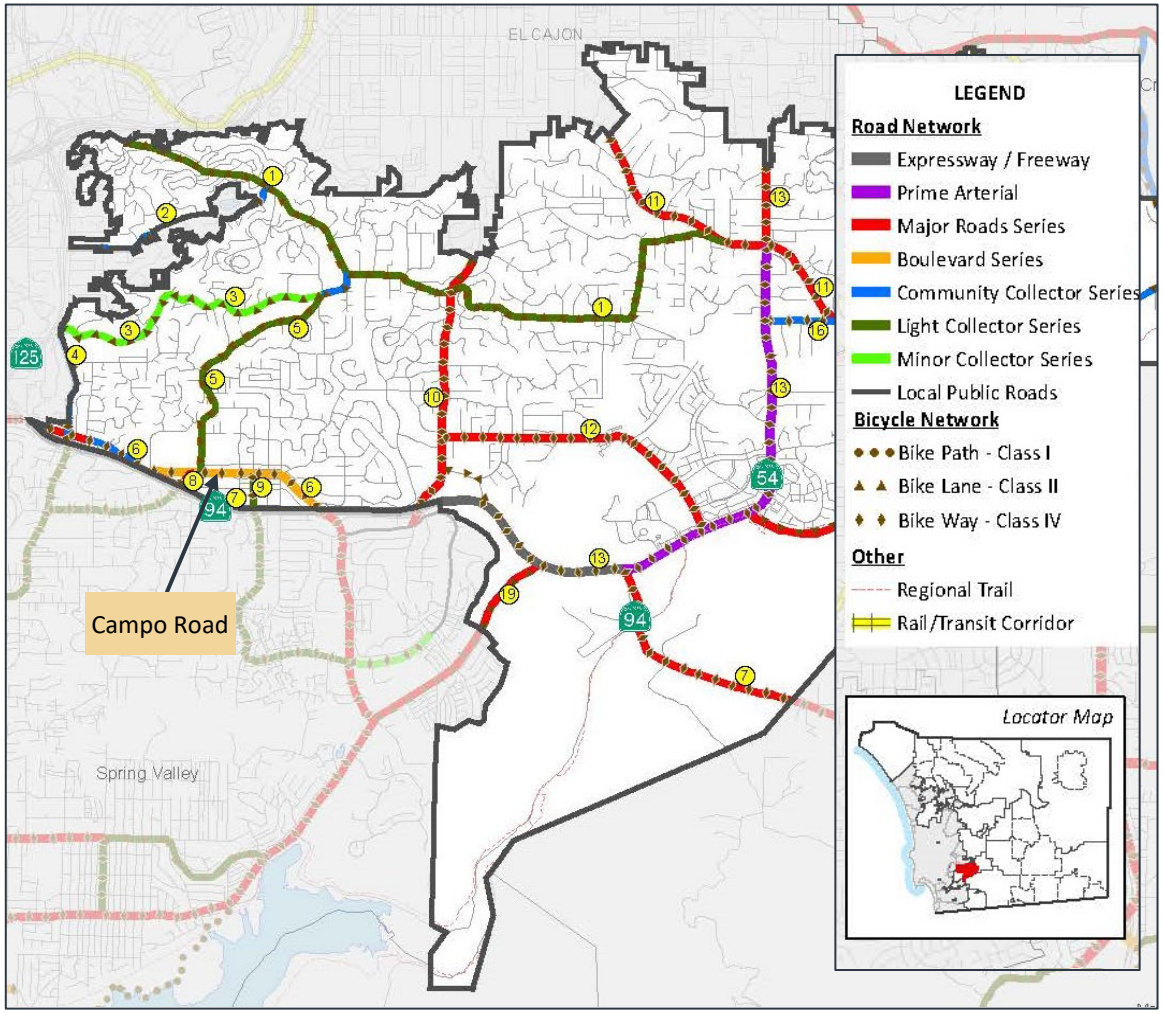
"The unique balance of urban, semi-rural, agricultural, and open space land uses shall be retained. The green-belt separation from adjacent cities and planning areas shall be preserved. The new development will conserve natural resources and topography and will provide a pleasant, safe environment for present and future residents of Valle de Oro."

Recommendations/policies identified in the Community Plan relevant to the intended vision for the Corridor include the following:

- Encourage the development of commercial business in compact configurations and discourage "strip" commercial developments.
- Require neighborhood clustered shopping areas to provide pedestrian orientation and meet strict design controls.
- Require the front yard to be a minimum 10-foot depth from the street right-of-way (ROW) for multi-family developments.

The Specific Plan incorporates the intent of these recommendations for the Corridor and the overall vision of revitalizing the Corridor as a vibrant commercial area and high-quality and attractive residential uses is consistent with the Community Plan.

Figure 9: Valle de Oro Mobility Element Network



Source: San Diego County General Plan

4.3 County Active Transportation Plan

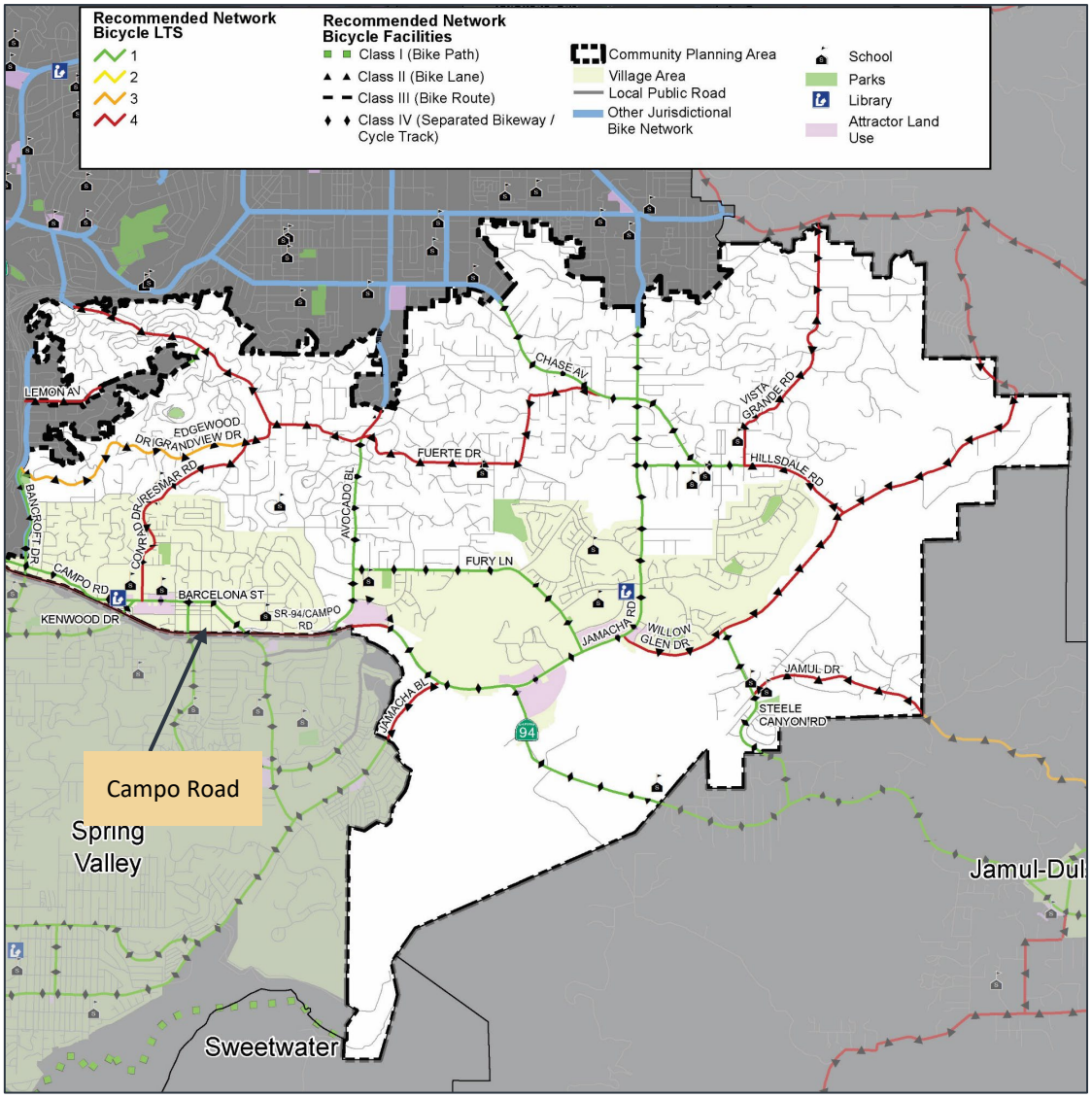
The County's Active Transportation Plan (ATP) designates Campo Road as a General Plan Mobility Element roadway. However, despite its inclusion in the ATP and designation as a Mobility Element road, Campo Road lacks many of the features necessary to travel comfortably and safely by foot, bike, or bus. Existing conditions within the Corridor documented in 2020 include varied sidewalks, pedestrian ramps, and marked crosswalks. However, the ATP identifies the excessive number of curb cuts and driveways along Campo Road (over 70 in a 0.6-mile stretch). Such conditions result in a high level of pedestrian and bicyclist stress for users within the Corridor. Additionally, crosswalks are provided across Campo Road and not the other minor streets.

The study area is actively served by public transit and supports 14 bus stops along Campo Road. Many bus stops have shelters or maps/wayfinding information; however, seating and lighting are varied.

Under current conditions, Class II bike lanes are provided on Kenwood Drive and on Campo Road on both sides of the street. The ATP identifies a Class IV cycle tracks along Campo Road, as shown in **Figure 10**. The inclusion of bicycle facilities on Campo Road in the County's ATP represents conditions at full buildout.

The Specific Plan deviates from the ATP recommendation to provide a Class IV cycle track and instead provides a Class II buffered bike lane. The reasoning for this deviation is provided under Bike Facilities strategy on Chapter 2 of Specific Plan.

Figure 10: County Active Transportation Plan



Source: San Diego County Active Transportation Plan

4.4 SANDAG Smart Growth Opportunity Map

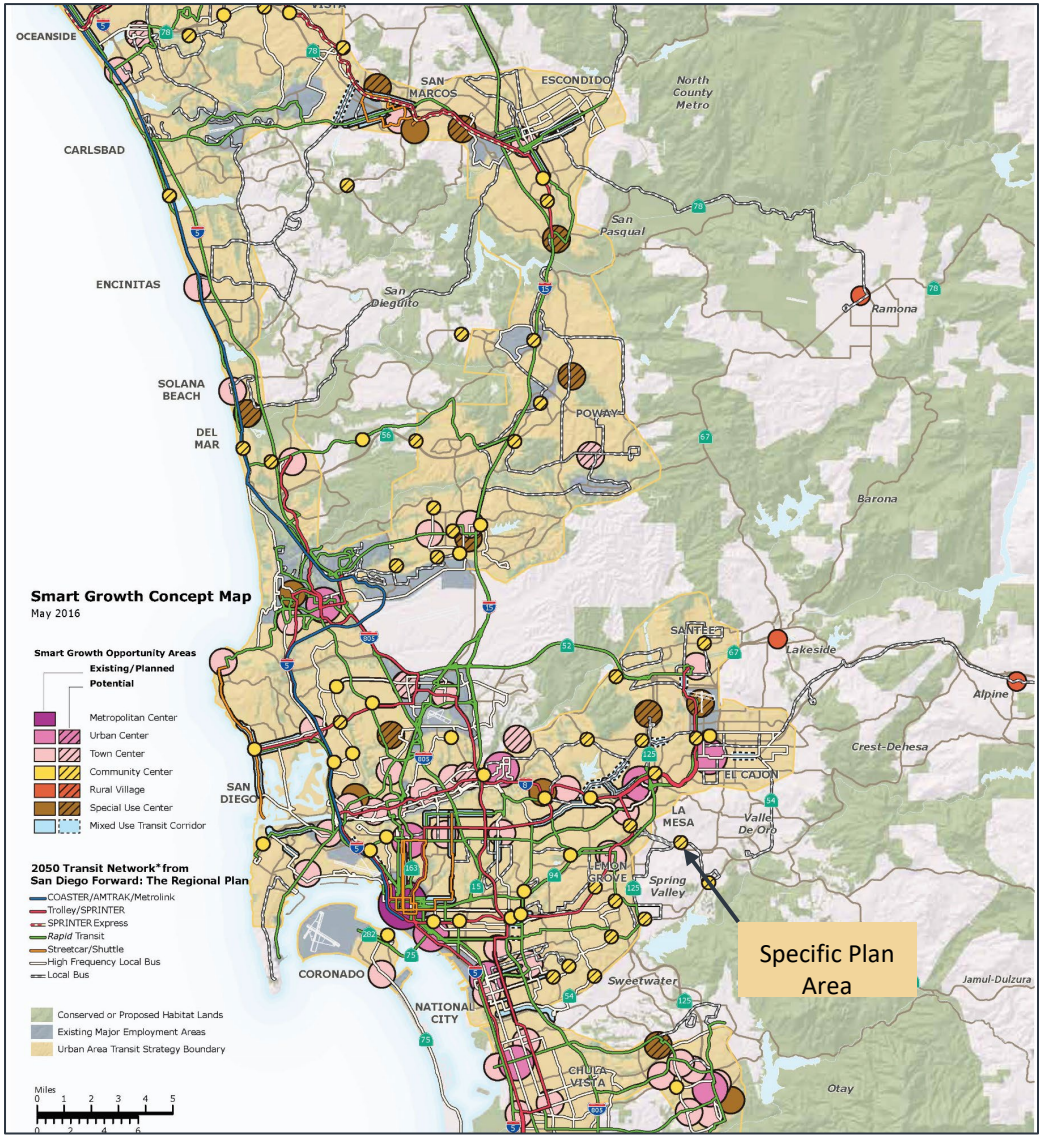
SANDAG's Regional Comprehensive Plan (RCP) for the San Diego region was adopted in 2004. The RCP was incorporated into San Diego Forward: The Regional Plan and provides guidance for future development within the San Diego region, based on smart growth and sustainability concepts. The RCP addresses integrating land use, transportation and infrastructure systems, and public investment strategies within a regional smart growth framework.

The RCP preparation included developing a smart growth concept map identifying existing, planned, and potential smart growth areas. Smart growth is generally characterized by higher-density, more compact development in urbanized areas that are walkable and bike-friendly, is within proximity to public transit, and incorporate good community design principles.

As stated, this specific plan's preparation was funded by a SANDAG Smart Growth Incentive Planning Grant. The SANDAG Concept Map identifies potential Smart Growth Opportunity Areas, including over 200 locations in seven smart growth categories identified in the RCP. SANDAG identifies the Specific Plan Area as a Potential Community Center (CN-11), as shown in **Figure 11**.

The Specific Plan has been prepared in accordance with such smart growth principles and is intended to create a vibrant and accessible community center in the heart of East County.

Figure 11: SANDAG Smart Growth Opportunity Map



Source: San Diego County Regional Comprehensive Plan (RCP)

4.5 SANDAG Regional Transportation Plan (RTP)

The 2030 San Diego Regional Transportation Plan: Pathways for the Future (RTP) was adopted by the SANDAG Board of Directors in 2007. The RTP provides a growth forecast for the San Diego region and aims to achieve a transportation system that enhances the quality of life and meets the region's mobility needs now and in the future. The 2030 RTP represents the transportation component of the RCP.

The Specific Plan intends to provide guidance to achieve smart growth principles acknowledged in the RTP, strengthening the land use–transportation connection and recognizing the need to coordinate transportation infrastructure and services with land use planning to reduce traffic congestion, improve mobility, and enhance the quality of life. The Specific Plan provides a means for connecting transit and roadway improvements to existing and future land uses in the Corridor, such as additional residential and commercial uses within proximity to schools, work, shopping, and other activities, as development occurs over time.

4.6 County of San Diego Zoning Ordinance

The Specific Plan would take precedence over design requirements identified in the County Zoning Ordinance unless otherwise specified in the Specific Plan. The development standards and design guidelines will provide key objectives related to desired types of business and business development, permitted land uses, development regulations, and design guidance. Except where superseded by this Specific Plan, requirements of the County Zoning Ordinance apply.

The Specific Plan will be adopted by the County Board of Supervisors, in concurrence with General Plan and Zoning Amendment.

4.7 CEQA Compliance

A CEQA analysis was conducted according to the County's Environmental Review Update Checklist Form for Projects with Previously Approved Environmental Documents (15162/15164 Checklist) to evaluate potential impacts resulting from the implementation of the Specific Plan. It was determined that the certified Final Environmental Impact Report (EIR) previously prepared to evaluate the General Plan Update (GPU) adequately covers the Specific Plan's potential impacts. Therefore, an Addendum to the Final EIR was determined to be the appropriate CEQA document to analyze the Specific Plan. The Addendum concluded that, since the GPU EIR was certified, there are no changes in the project, changes in circumstances under which the project is undertaken, and/or "new information of substantial importance" that would cause one or more significant effects.

The Specific Plan is intended for planning purposes and does not itself require discretionary permits (i.e., building or grading permits) or improvement plans (i.e., Site Plan) for implementation. However, future individual development projects proposed within the Corridor would be subject to further discretionary review and approval by the County, as applicable, to evaluate potential short- and/or long-term impacts. Such future development would be evaluated for conformance with applicable local, state, and federal requirements, as appropriate at the time of consideration, to assess the potential for any new impacts outside the scope of the GPU EIR not previously considered.

Appendix A
Community Outreach

CASA DE ORO

CAMPO ROAD REVITALIZATION PLAN

Contents

Stakeholder Interviews

November 9 and 14, 2017

County of San Diego Planning and Development Services Staff and team members from Michael Baker International hosted a two-day series of stakeholder interviews with community members in and around the Casa de Oro Revitalization Strategy study area. The intent of the stakeholder interviews was to seek and collect input from local residents, property and business owners, school representatives, and all interested community members from along and immediately around the Campo Road area to discuss issues and concerns. Interviews focused on issues and ideas concerning land use, design, safety, traffic/parking, landscaping, and other topics.

Stakeholder interviews were held at Butler's Coffee House (9631 Campo Road) on Thursday, November 9 and Tuesday, November 14 between 10:00 a.m. and 2:00 p.m.

The stakeholder interviews were informal with focused discussions on issues, concerns, and ideas for improving the project area. Interviews were scheduled in 30 minute increments. A questionnaire and map of the area was presented to each stakeholder to guide discussions on existing challenges, preferences, and priorities of the revitalization plan area as perceived by the community.

Stakeholder interview invitation notifications were sent via email to interest and contact lists made available by the Casa de Oro Alliance, Spring Valley Chamber of Commerce, Institute for Public Strategies, and available contact information for local businesses. The project and stakeholder interview announcement was also made to the Valle de Oro Community Planning Group at their monthly meeting on Tuesday, November 7.

Over the two-day interview period, 52 community members participated in the stakeholder interviews. The participants represented a range of organizations and interest groups, including:

- Casa de Oro Alliance
- Valle de Oro Community Planning Group
- Spring Valley Community Planning Group
- Spring Valley Chamber of Commerce
- Business owners
    - Wang's Acupuncture
    - Butler's Coffee Shop
    - Attorney and Real Estate Office located across from Starbucks
- Property owners
- La Mesa-Spring Valley Unified Schools
    - Murdock Campus
    - Casa de Oro Elementary
    - Facilities and Maintenance
- Residents
- Grossmont-Mt. Helix Improvement Association
- Rancho San Diego Association

- Youth Ventures
- Dictionary Hill Association

SUMMARY OF ISSUES AND CONCERNS

When asked about the key issues or concerns for the area, the most common responses included:

- **Lack of maintenance/poor aesthetic quality.** Several participants indicated that property owners and businesses do not maintain the exterior of their properties/businesses, including the larger chain stores like CVS and Albertsons where higher standards are expected. Participants noted excessive marketing signage, or signage pollution, along building frontages that consume a majority of the business windows. The corridor lacks sufficient lighting, trash cans, and other necessities. Almost all participants mentioned that due to the lack of maintenance by existing businesses, many nearby community members choose to travel to neighboring areas to shop and complete errands.
- **Prevalence of undesirable land uses.** Participants stated the high prevalence of legal and illegal pot shops, taco stands, and liquor stores or establishments that sell liquor. An overabundance of low-income multi-family apartment buildings and "halfway houses" was also mentioned.
- **Absence of desirable land uses.** Almost all participants indicated the lack of desirable land uses or activities along Campo Road. Several individuals stated they would like to have a place to have a sit-down meal, including breakfast and dinner, or activities/entertainment for youth and elderly age groups. Participants mentioned there are currently very few places along the corridor to eat or gather.
- **County regulations deter new development/business.** Participants from the business community stated that the County's regulations made it very difficult to open new business or renovate existing businesses. Several participants from the business community added that the permitting process is slow. The parking requirements are too difficult to achieve given the size or location/orientation of lots. The County imposes improvements and mitigation measures that are not feasible for small businesses to achieve.
- **Code violations.** Participants stated that many businesses in the area, particularly the undesirable or "high-risk" businesses, are in violation of current County codes and policies. Participants added, when reported to the County or local authorities, minimal response is provided and enforcement is lacking. While some response by code enforcement and authorities was acknowledged, participants believe there is a lack of consistent and long-term enforcement that allows the pattern of code violations to continue. Examples were given of illegal businesses being shut down by code enforcement and reopened within a few days.
- **Poor perception deters interest and investment.** Participants stated that the overall perception of Casa de Oro is poor and further deters people from investing or visiting the area. The poor perception and lack of a focused improvement plan has created apprehension from the business community in investing funds to start or improve their businesses.

SUMMARY OF OPPORTUNITIES

When asked about the opportunities envisioned by participants for the area, the most common responses included:

- **Provide more community-based activities and uses.** There is a desire for community activities and uses, particularly for youth, families, and senior cohorts. The representatives from the local schools indicated that children need supervised places to recreate after school, such as a permanent library or community center. Many of the interview participants were long-standing residents who grew up and remained in Casa de Oro throughout their lives with no plans to relocate. They shared a desire for elderly community centers and see Campo Road as an opportunity for such land use as it is accessible from several residential neighborhoods and offers transit. Nearly all participants indicated the need and desire for a wider selection of places to eat, including breakfast/coffee, dinner, and high-quality brewery or bar type establishments.
- **Potential economic support from surrounding residential areas accessible to Campo Road.** Several participants indicated the density of residential areas surrounding Campo Road as an asset and opportunity. It was stated that many areas in the area are of medium to above-average economic status and residents with resources to patronize and revitalize the area. Residents would be interested in recreating and supporting the area if there were improved or additional things to do and places to go.
- **Require higher standards for businesses and maintenance.** Many participant expressed the desire to utilize the revitalization strategy to improve the standards for business and maintenance to ensure a higher quality environment. This would include design standards suitable to the character of the area to be consistent along the corridor.
- **Provide street improvements and enhanced mobility facilities.** A variety of streetscape enhancements are desired, including pedestrian friendly sidewalks and amenities such as seating, landscaping, and trash cans. Bike facilities were suggested to occur along the periphery streets, San Juan and the alley way behind Albertsons, south of Campo Road. Participants indicated they would bike or allow their children to bike to school if safer facilities were provided.

Casa de Oro Fall Festival

Saturday, November 9, 2019

10 AM to 3 PM

On Saturday, November 9, the project team set up a booth at the fourth annual Casa de Oro Fall Festival held on the grounds of the Spring Valley Academy. The booth included the following resources and exercises:

- A project aerial map which also served as a place to identify issues and opportunities;
- A number of vision boards where visitors to the booth could rate or identify images they liked and provide written comments;
- A sign-up sheet to stay involved;
- Comment/information forms; and,
- Two project team members and one county planner available to explain the project and answer questions.

Over the course of the day, an estimated 200 people stopped by the booth to ask questions, provide their thoughts, take part in the interactive exercises, or just take a look at the materials. Most of the visitors seemed excited about the opportunities to improve the corridor. Twenty-eight individuals added their names to the sign-up sheet.

The project aerial map helped orient people to the corridor. It also served as a space for individuals to discuss additional opportunities and concerns, including these:

- Add more green space
- More trees
- Make a playground/green space
- Provide better access to Estrella Park
- Expand to neighborhoods across Hwy 94; lots of kids and families walk
- Tear down block wall at Grocery outlet parking lot
- Connect parking lots – down with walls
- No connections for cars or walking in parking lots
- Add eco-friendly roundabouts – no stoplights; cut down on speeding and look better
- Dangerous intersection for pedestrians at Conrad & Campo Road
- New crosswalk (mid-block) needed between Conrad and Bonita
- Slow traffic down on side streets

Three vision boards were developed, each with a variety of different images depicting various activities, character, form, and scale that might be appropriate for the future of Campo Road and its environs. Comments left via post-it notes included:

- Keep big trees
- Shade please
- Trees, pavers, crosswalks
- Sidewalks with trees to cool the area
- Trees, walkable, variety
- More sidewalks
- Make the sidewalks walkable
- La Mesa - walkable, charming, variety
- More bike lanes

- ADA accessibility/sidewalks/ramps/discontinuous sidewalks
- Playground
- Recreation areas for kids and adults like a bowling alley
- More family-friendly areas
- Art displays, sculptures, and play area
- Public space for music (like Liberty Station)
- Casa de Oro – gold, Spanish style
- Need CDO to be more quaint, homey, country feel. We are not a big city.
- I like the look of Downtown Mesa; I second!
- Less bars, smoke shops and taco shops
- More commerce in our area so we don't have to leave our area
- More grocery
- With an influx of 100's more families, we need more shopping (specifically grocery)
- Family pub or restaurant

Casa de Oro Student Vision

Spring Valley Academy Workshop
February 18, 2020

The Casa de Oro Specific Plan team facilitated a short visioning exercise with approximately 25 seventh and eighth graders at Spring Valley Academy on February 18, 2020. The students are part of a student organization called No Place for Hate. The exercise began with a brief background about the Casa de Oro project, followed by an activity where the students worked in groups of four and used random objects (e.g., pipe cleaners, broken toy parts, buttons) to design and express their visions for a better Casa de Oro. Each team then described their design. Key improvements were captured on flip charts as the students presented. As shown in the list below, some ideas repeated by the student teams include trees, a recreation center, more shops, and outdoor sports fields.

STUDENT IDEAS FOR CASA DE ORO

- Recreation center for arts and other activities
- Trees
- A logo (identity) and more decorations outside
- Flowers in the road
- Baseball fields
- Lights outside
- Donut shop
- Cleaner
- More people
  (more talking and socializing)
- Safer
- Trees
- Basketball courts
- Better grocery store
- Pool
- Soccer fields
- McDonalds
- Dog park
- Trees
- More shops
- Grocery
- Trees
- Recreation center (activities for students)
- Coffee shop
- Bakery
- Grocery stores
- More stores
- Trolley
- Bakery

- Trees
- Pool
- Community center
- Art
- Ferris wheel
- Fire pit
- Baseball field
- Fields to play

Community Visioning Workshop Summary

February 25, 2020

On Tuesday, February 25, 2020, from 6:00pm to 8:00pm, the Casa de Oro Specific Plan team held a community visioning workshop in the cafeteria of the Spring Valley Academy. The workshop was attended by numerous stakeholders from the community – thirty-four individuals signed in on the interest list, but several more were in attendance. The workshop opened with comments from Felix Aponte, San Diego County and Bob Yarris, Casa de Oro Alliance. This was followed by a short overview presentation focused on the specific plan background, purpose, and overall schedule.

The attendees next were led through an interactive Post-it Note Visioning exercise. They were each given several Post-it Notes and asked to individually respond to a series of three big idea questions outlined below. Participants were asked to think about each question and then record one answer or thought on separate Post-it Notes and place them under the appropriate topic on the wall (treasures, challenges, visions). The Casa de Oro Specific Plan team then grouped the ideas into categories and themes and shared the summary with the larger group who had the opportunity to discuss, add more thoughts and clarify some ideas. The topic areas that emerged for each topic are identified below.

What are the treasures of Casa de Oro? What do you love? What are its best assets?

Key topics and themes included:

- Local Businesses
- Sense of Community/Character
- Trees/Nature
- Location
- Schools
- People
- Saint Sophia
- Library
- Safety
- Other

What are the challenges in Casa de Oro? What are the obstacles and issues that need to be addressed?

Key topics and themes included:

- Traffic/Circulation/Streets
- Business Types/Land Use
- Aesthetics/Design
- Community Spaces/Activities
- Homelessness
- Trash/Cleanliness
- Crime
- Identity

- Other

What are your visions for the future of Casa de Oro? What do you hope the community looks and feels like in 5, 10, 20 years? What will be here?

Key topics and themes included:

- Arts & Culture /Events
- Walkable & Bikeable
- Landscaping/Green
- Business Mix/Land Uses
- Community Spaces/Park
- Aesthetics /Design
- Restaurants/Outdoor Dining
- Identity/Feel
- Library
- Other

Based on the Post-it Note exercise findings and large group discussion, a number of key themes were selected by the participants as breakout session topics in which they wanted to take a "deeper dive". Participants were invited to join any of the six breakout sessions they wished but were encouraged to spread themselves around. During each session, the small groups were given about thirty minutes to 1) discuss the topic more thoroughly; 2) record additional thoughts or details that explain the vision for the topic; 3) if applicable, articulate ideas (or issues) on the provided project area maps; and, 4) identify any possible implementation tools, steps or resources needed. At the end of the breakout session work, a representative from each group was asked present their key findings. The topics and a summary of the small group discussions are provided below.

1. Walkability / Bikeability

Issues identified are:

- No sidewalks
- Lots of curb-cut (driveway/road)
- Cars go too fast
- Conditions of the road/sidewalk
- Walls separate business areas & discourage walking
- No usable bike lane
- "Share the Lane" is needed

Solutions include:

- Safe routes to schools
- Lighted/flashing crosswalk
- Speed limits that encourage walkability
- Street calming (traffic)
- Segregated bike lanes
- Remove walls (barriers) that keep residents from walking between business areas
- Better timed streetlights
- Repair roads and sidewalks

- Route to Murdoch school
- Appropriate speed limit to encourage walkability
- Getting to businesses on the same block

2. Open Space / Trees / Environment

Goal: Incorporate native low maintenance, low water, landscape throughout retail and residential areas for shade and aesthetic enjoyment.

- Green median with Jacaranda trees
- More trees for shading and green ground cover
- Pervious pavement – parking lots to reduce flooding
- Landscaping at commercial facilities
- Remove dilapidated buildings and parking lots and replace with park
- Using natural seasonal Sweetwater check for and/or walking and biking paths w/aesthetic natural landscape
- Green round-abouts at each end of Campo Rd
- Green access from Estrella Park to Campo Rd
- Make Campo Rd one-way

3. Building Architecture / Facades

Goal: Adopt regulations to encourage improved aesthetics and create more coordinated architecture and building patterns/placement that encourage consumers to use local businesses and create a better sense of place as our community core.

- Kenwood to Sweetwater Springs = extent of areas
- Control traffic thru-trips
- More focus on local businesses - hard to see as back from road
- Slow traffic on Campo Rd (roundabouts, etc or other techniques)
- Santa Sophia landmark is hidden (on-street package, etc) - often the church forms center of town
- Buildings closer to street - business activity on street
- Split up parking - disburse buildings with parking
- Offer on street parking; Parking behind businesses - use paseo/path to connect
- Allow for circulation connection between properties off Campo Road / reduce driveways on Campo Rd
- Build up, not out (3-4 stories)
- Not big building masses/break them up
- Address the street
- Lower floor retail w/residential overt (mixed use)
- Common-theme or limited themes or variety
- Limit back of buildings (activate sides, rears of buildings)
- Locate businesses on other than Campo Rd (re: dual frontage w/Kenora & San Juan)
- Promote larger scale redevelopment of older blocks w/small parcels (like Treebeard)
- Improve aesthetics
- Encourage business activity & consumer use
- Design guidelines

4. Business Mix

Goal: Work to support existing businesses and bring in a mix of vibrant restaurants, boutique shops and mixed-use that will enhance the character and residential mix of our community.

- Mixed Use
- 3-Story
- Business District
- Retail + condo/apts
- Good Italian Deli
- Sports Bar/Restaurant w/outside seating
- Breakfast/Lunch Restaurant
- Clothing Store
- Brew Pub
- Rec Center/Library/Community Center
- Mom + Pop Café
- Fitness Center
- Urgent Care Clinic
- Hardware Store
- Art Gallery
- Boutique Store
- Computer Store
- Jewelry Store
- Ice-cream/Desert Store

5. Arts & Culture

Vision: Casa de Oro – A Wealth of Arts & Culture; Incorporate into the Community

- Galleries
- Gallery & gift shop with crafts made by homeless and disadvantaged people
- Next to Rana's
- Next to Frank's Bakery
- Pop-up shows
- Murals
- Electrical Boxes
- Auto Zone (gladly)
- Tree-Beard building
- CVS
- Frank's Bakery
- YAT
- Community Events (ongoing)
- Fall Festival
- Flag Day
- Tree Lighting
- Public Art
- Film Festival (Outdoor?)
- Young Artist Involvement
- Nightlife/Entertainment

- Performing Arts
- Street Performers (High Schoolers?)
- Multi-cultural Festivals

6. Identity

Goals: Banners, theme décor, town sign, etc. Host a contest to determine theme?
Logo ideas & concepts:

- Avocados
- Santa Sophia
- Rural/City Combo
- Mt. San Miguel – Logo
- Mt. Helix – Logo
- Corridor /Trees/Native plants
- Local/Non-chain
- Nook
- Friendly village

Motto ideas:

- “Small Town with a Big View”
- “Green Oasis”
- Oasis Village
- The treasure is in our community
- The Treasure of Our Community
- A Small Town Treasure
- Our Treasure is Our Town
- A Small Town with a Big View

The workshop included a kids’ activity area where one young man really enjoyed drawing his ideas for the future. At the close of the workshop, he was given the microphone and presented his array of creative ideas for Casa de Oro that included “rainbows”, “no more homelessness” and “no more traffic jams”. The Team then thanked everyone for attending and noted that the notes from the meeting would be summarized and posted online and that everyone who signed in would be notified when the next engagement opportunity was scheduled.

Guiding Principles Community Workshop

October 15, 2020

Q1: **Which of the following best describes you?** | **Q2:** **Participated before?** | **Q9:** **Any additional comments or feedback.**

#	Live in Casa de Oro	Work in Casa de Oro	Own Property in Casa de Oro	Other	Did not anser Question 1	Yes	No	Did not answer Question 2	Free response to Question 9
1	▲					✔			
2	▲					✔			Please consider music venues, outdoor entertainment spaces, and entertainment (museum, arts, music) as a much needed addition to the area!
3	▲						✘		
4	▲		▲			✔			Thanks for asking for community input and I look forward to hearing more!
5	▲		▲				✘		
6			▲				✘		I would hate to have traffic circles
7	▲						✘		Hope that re-zoning removes the high risk businesses, vaping shops, massage parlors, cannabis dispensaries, etc.
8				Live just adjacent to Casa De Oro			✘		Nice job, thanks so much.
9									Answered the above during webinar. Absolutely no mention of public safety. Campo Road and immediate surround has become a dangerous area after dark. Cannot expect new businesses to invest if that continues to be the case.
10	▲					✔			Thank you for an excellent presentation.
11	▲		▲				✘		I appreciate the notification for the webinar and appreciate the opportunity to attend.
12	▲					✔			

	Q1: Which of the following best describes you?					Q2: Participated before?			Q9: Any additional comments or feedback.
#	Live in Casa de Oro	Work in Casa de Oro	Own Property in Casa de Oro	Other	Did not anser Question 1	Yes	No	Did not answer Question 2	Free response to Question 9
13	▲	▲	▲				✖		jeff.prentice@gmail.com
14			▲					Not Sure	Thank you, and the Casa de Oro Alliance, for this presentation. Casa de Oro is a wonderful area, and will reward the effort.
15		▲							The biggest problem with this plan is tightening up the road with parking and burms for pedestrians and bike lanes and center median. If you watch the rush hour traffic now we cannot give up the space needed on the roads by the current population. While your plans sound nice, they won't work with the amount of traffic and people who come through this area. You will choke it off entirely and kill what businesses do use the are. Be very careful of choking off Campo Road in this process.
16	▲		▲				✖		

	Q1: Which of the following best describes you?					Q2: Participated before?			Q9: Any additional comments or feedback.
#	Live in Casa de Oro	Work in Casa de Oro	Own Property in Casa de Oro	Other	Did not anser Question 1	Yes	No	Did not answer Question 2	Free response to Question 9
17				I live very close to the planning area and shop in the area often.			✗		Just barely outside the corridor on the south side of the freeway, a crosswalk with flashing warning signal is desperately needed between bus stops on Sweetwater Springs Blvd and Campo Rd - specifically between the Shell gas station and Wienerschnitzel. Pedestrian and wheelchair crossing here is life-threatening.
18	▲					✓			1. IDENTITY- HOUSE OF GOLD concept is a Fantistic identity that is a natural and should not be ignored. The existing "gateway to Mt Helix" is inappropriate and must be upgraded! 2. Our NATIVE PLANTS, animals, pollinators, and environment must not be trampled and crushed when moving forward 3. Our Casa de Oro LOCAL WATERWAY/stream that has existed for MILLENIA in this streetand community is a VITAL part of the interconnected waterways and environment throughout San Diego County. PLEASE PLEASE PLEASE include and integrate this CRITICAL waterway in ALL future plans, visions and missions or risk the wrath of the environmntalists, local groups and, most importantly, our children and future generations! THANK YOU!
19	▲						✗		Campo road is like an artistic designer's dream. There is so much potential to rebuilding the area and so easy to start word about the new up an coming area that was once considered a very conservative lower-income area to a new vibrant, eco friendly and innovative neighborhood.
20	▲						✗		Shut down the illegal pot shops that are a draw to crime and trash!! #1 priority!!

#	Live in Casa de Oro	Work in Casa de Oro	Own Property in Casa de Oro	Other	Did not anser Question 1	Yes	No	Did not answer Question 2	Free response to Question 9
	Q1: Which of the following best describes you?					**Q2: Participated before?**			**Q9: Any additional comments or feedback.**
21				I own property near campo			✖		
22	▲						✖		
23	▲						✖		I would really like to see wider sidewalks so we can eat outside or a plaza with outdoor dining. I hope all CA native plants will be used for landscaping. This would align with the local culture theme in the vision statement and nearby elementary and middle school children could benefit from habitat studies in their neighborhood
24	▲		▲				✖		A walkable and inviting design with business that caters to the community needs. I like the idea of parking in the back.. but also need to consider convenience of access for parking
25				We live off of Avocado and Hiway 94 in the northwest corner.		✔			Even though it is late in the game,I am concerned that there are communities around the area that are not at the table for whatever reasons. The work that has been done so far is wonderful and impressive. Many families that occupy and use the area for schooling, entertainment etc live south of the 94 freeway. I want to make sure that those voices are given access to the discussion. Hopefully you receive this inquiry in the proper spirit. Thank you
26	▲						✖		The area does NOT need more housing!
27	▲		▲			✔			you have our input ,now it is your turn to speed the implementation of thoughts and plans of the voters of casa de oro.
All	19	2	9	0	0	8	16	0	

#	Q3: Vision Statement: Create an attractive, vibrant and pedestrian-oriented mixed-use district and center of activity in which a historically rich, culturally diverse community can live, work, shop, dine, and socialize. Campo Road serves as the heart of the District. Please provide your thoughts on the draft vision statement in the space below. **Free response to Question 3**	Q4: Guiding Principle #1: A Welcoming Place for Everyone The Campo Road Corridor must be inviting and welcoming to all residents, employees and visitors. Create unique and special gateways and streetscapes that generate positive expressions of Casa de Oro. Encourage a community gathering space and other small public spaces as amenities. Incorporate the wealth of local arts and culture into the community. Please provide your thoughts on Guiding Principle #1 below. **Free response to Question 4**
1		
2	I love it and am exited to see this transformation. I think continuing to engage the community and asking for support from residents and business owners is very important - many people are not aware this is going on and I feel this should be shouted from the rooftops to get people involved and to help as much as we can.	I love the idea of incorporating roundabouts in this area and filling them with local art and culture to welcome and inform/educate visitors about this unique area.
3		remove the large billboards. These do not give the feel of a small community and also don't typically attract the best clientele. Love the idea of some open spaces and bringing cohesive landscape in to the area. I also like the idea of some sort of visual entrance to Casa de Oro.
4	Love it!	I think that's what is lacking most...inviting and welcoming for both residents and visitors
5		
6		
7		
8	Lovely!	
9		
10		Open inviting streetscapes would be wonderful. Please get rid of all the billboards on Campo Road!
11	I like the vision statement but am unsure how realistic it is for the CDO neighborhood. Perhaps when there is an actual plan enthusiasm and motivation will improve.	Again, I am encouraged by the Guiding Priniciple of a Welcoming place for everyone.
12		

#	Q3: Vision Statement: Create an attractive, vibrant and pedestrian-oriented mixed-use district and center of activity in which a historically rich, culturally diverse community can live, work, shop, dine, and socialize. Campo Road serves as the heart of the District. Please provide your thoughts on the draft vision statement in the space below.	Q4: Guiding Principle #1: A Welcoming Place for Everyone The Campo Road Corridor must be inviting and welcoming to all residents, employees and visitors. Create unique and special gateways and streetscapes that generate positive expressions of Casa de Oro. Encourage a community gathering space and other small public spaces as amenities. Incorporate the wealth of local arts and culture into the community. Please provide your thoughts on Guiding Principle #1 below.
	Free response to Question 3	**Free response to Question 4**
13	Sounds good. Challenging. Lot's of socieoeconomic issues, lack of infrastructure (Unincorporated) Need more trees. And landlords from what I hear aren't interested in improvements - They make more money on tax write offs.	Get some small green spaces in all that asphalt and concrete. But there has to be supervision. Drugs, homeless, all that will go on in those areas. I live between two halfway houses and it isn't pretty.
14	The draft vision statement sounds great. The Casa de Oro business district could be really attractive--it's surrounded by some dramatic hills and interesting landscape. As part of this process, I hope that Campo Road can become less dominant (as a traffic expanse) and the amount of asphalt in the area decreased.	Sounds great. Might also help to incorporate some of this area's history, as told in TJ Adema's "Our Hills and Valleys"--with historic plaques? It's really interesting, including the historic banyan tree near the Kenwood freeway exit.
15	This sounds good but it is important to keep the zoning to include clean industry like the Deering Banjo Factory which brings 5 million a year into this neighborhood and also is a tourist destination for visitors from the world over to the Deering Factory Showroom. We need to maintain the infrastructure and roads for the large trucks that bring supplies both to the Deering factory and the large grocery stores along campo road.	Agreed and as well, it needs to be business friendly so that the people can work as well as play in CDO. Deering Banjos can be a resource to bring more culture into the community and can help create a center for Banjo and music in the area which can grow CDO into a unique tourist destination.
16		

	Q3: **Vision Statement: Create an attractive, vibrant and pedestrian-oriented mixed-use district and center of activity in which a historically rich, culturally diverse community can live, work, shop, dine, and socialize. Campo Road serves as the heart of the District. Please provide your thoughts on the draft vision statement in the space below.**	Q4: **Guiding Principle #1: A Welcoming Place for Everyone The Campo Road Corridor must be inviting and welcoming to all residents, employees and visitors. Create unique and special gateways and streetscapes that generate positive expressions of Casa de Oro. Encourage a community gathering space and other small public spaces as amenities. Incorporate the wealth of local arts and culture into the community. Please provide your thoughts on Guiding Principle #1 below.**
#	**Free response to Question 3**	**Free response to Question 4**
17	Sounds just about right.	The Corridor must not be welcoming to cannabis dispensaries and those who would gather to cause trouble
18	This is a lovely vision statement. However it is lacking reference to the NAME of the area: HOUSE (home) OF GOLD. Please consider a way to include the NAME "House of Gold" or GOLD or GOLDEN HOME in some way IDENTITY- HOUSE OF GOLD concept is a Fantistic identity that is a natural and should not be ignored. The existing “gateway to Mt Helix” is inappropriate and must be upgraded! Our ENVIRONMENT is the HOUSE OF GOLD for our local Native Plants, animals and water course!	1, Please consider a way to include the NAME "House of Gold" or GOLD or GOLDEN HOME in some way . 2, Please includle a Welcoming Place for our Native Plants, Native Animals and Water Course!
19	A much welcome improvement idea to an area where I have found to be a not so welcoming and attractive area. I believe an area that has such a diverse culture would greatly benefit both homeowners as well as businesses. I believe if well planned out, people from San Diego and other regional areas from our county would want to come to visit this newly developed area.	I feel that enriching the Campo road with enticing businesses to remodel their storefronts as well as encourage new businesses ie. international food choices from African American bbq, to local beer to international cuisine would create a much talked about and welcoming place.
20	Safety & business prosperity should be a main concern	Streetscapes & gatewyas sound good, but not sure about a community gathering space, as these often lead to drug dealing etc.

#	Q3: Vision Statement: Create an attractive, vibrant and pedestrian-oriented mixed-use district and center of activity in which a historically rich, culturally diverse community can live, work, shop, dine, and socialize. Campo Road serves as the heart of the District. Please provide your thoughts on the draft vision statement in the space below.	Q4: Guiding Principle #1: A Welcoming Place for Everyone The Campo Road Corridor must be inviting and welcoming to all residents, employees and visitors. Create unique and special gateways and streetscapes that generate positive expressions of Casa de Oro. Encourage a community gathering space and other small public spaces as amenities. Incorporate the wealth of local arts and culture into the community. Please provide your thoughts on Guiding Principle #1 below.
	Free response to Question 3	**Free response to Question 4**
21	i think it is a great idea and heading in the right direction in making our neighborhood beautiful again.	streetscaping , adding more trees and flowers, parks, green grass. Getting the homeless into shelters and off of streets so we all can enjoy our neighborhood.
22	It's good to see the vision is long term and not short sighted	I like the idea of promoting community gatherings
23	Love it!	Incorporate CA native plants into this plan
24	I think it is wonderful	
25	I feel the vision statement is wonderful and forward thinking.	I am very interested in providing a community space for all residents and visitors.
26	Long but I like it. I think it encompasses what everyone is looking for the disrict to be.	like it
27	beautify with trees open spaces and still provide mixed use perhaps with behind stores with pass throughs	all the above emphasis on streetscapes.
All		

Q5:
Guiding Principle #2: Clear Tools for Reinvestment and Revitalization It needs to be easy and straightforward for property owners, business owners, and developers to improve and revitalize the District. Revise and develop flexible development standards that reflect community goals and design preferencesand that facilitate normal cycles of investment, improvement and revitalization for all types of properties. Please provide your thoughts on Guiding Principle #2 below.

Q6:
Guiding Principle #3: Diversity of Land Use & Business The Campo Road Corridor will benefit from a diversity of businesses and uses. Allow and encourage a mix of land uses and businesses in the District that attract a variety of visitors and users. Encourage housing as a primary use to provide all-day activation and vibrancy. Please provide your thoughts on Guiding Principle #3 below.

#	Free response to Question 5	Free response to Question 6
1		
2	PLease involve the community in these! There is a lot of support that community members can provide so long as we are kept aware and updated on what is needed and how we can help.	
3	create a standard for businesses and update old/dilapidated store fronts that are currently along the corridor. It will bring some cohesiveness along the corridor.	There are already a significant number of multi-unit housing buildings just off campo along the corridor (north and south). There should be a plan to revitalize these before bringing more housing in to the area that will increase traffic. Revitalizing those will also bring more life in to the area.
4	Agreed!	Diversity is important & vibrancy is severely lacking right now. I think Campo Road is avoided for many residents and visitors. It is not family friendly at all.
5		
6		
7		
8		
9		
10	Planned facades for the buildings, a central theme and color scheme is really important to give the area a feeling of community.	
11	With competition so close from La Mesa, Lemon Grove, Rancho San Diego and El Cajon I am unsure of motivation for business owners to come to CDO.	
12		

	Q5: **Guiding Principle #2: Clear Tools for Reinvestment and Revitalization It needs to be easy and straightforward for property owners, business owners, and developers to improve and revitalize the District. Revise and develop flexible development standards that reflect community goals and design preferencesand that facilitate normal cycles of investment, improvement and revitalization for all types of properties. Please provide your thoughts on Guiding Principle #2 below.**	Q6: **Guiding Principle #3: Diversity of Land Use & Business The Campo Road Corridor will benefit from a diversity of businesses and uses. Allow and encourage a mix of land uses and businesses in the District that attract a variety of visitors and users. Encourage housing as a primary use to provide all-day activation and vibrancy. Please provide your thoughts on Guiding Principle #3 below.**
#	**Free response to Question 5**	**Free response to Question 6**
13	√	I don't know what this means "Encourage housing as a primary use to provide all-day activation and vibrancy."
14	There have been some difficult problems with some of the apartment complexes, and I hope that code enforcement and these new guidelines for development can help to control for poor management by landlords, going forward.	Does this mean that housing would be the primary use on Campo? As in, 2nd floor residential, first floor business? This is a bit confusing.
15	Yes, so long as the industrial zoning for the nearby locations like along Kenora Drive remain in tact.	Agreed so long as this does not conflict with the nearness of the Deering Banjo Industrial building.
16		

#	Q5: Guiding Principle #2: Clear Tools for Reinvestment and Revitalization It needs to be easy and straightforward for property owners, business owners, and developers to improve and revitalize the District. Revise and develop flexible development standards that reflect community goals and design preferencesand that facilitate normal cycles of investment, improvement and revitalization for all types of properties. Please provide your thoughts on Guiding Principle #2 below.	Q6: Guiding Principle #3: Diversity of Land Use & Business The Campo Road Corridor will benefit from a diversity of businesses and uses. Allow and encourage a mix of land uses and businesses in the District that attract a variety of visitors and users. Encourage housing as a primary use to provide all-day activation and vibrancy. Please provide your thoughts on Guiding Principle #3 below.
17		
18	1, Branding with the ACTUAL EXISTING name "Casa de Oro" aka HOME OF GOLD is a natural for INVESTMENT and should not be overlooked! 2, Reinvestment and revitalization MUST include the SUPPORT of our NATIVE ENVIRONMENT, including but not limited to supporting our NATIVE PLANTS, ANIMALS, POLLINATORS and WATER COURSE. IF we DESTROY our native environment, we destroy part of the reason WHY people want to live here	Our local environment is significant part of the HOUSE OF GOLD! Please include HONORING the Natural ENVIRONMENT, in the section for LAND USE- It is critically important to the survival of the area that we integrate the diversity of land uses and businesses with NATURAL NATIVE PLANTINGS and ALSO the PRE - EXISTING WATER COURSE that runs down the Main Street of Campo Road! Please do not allow that to be paved over forever, destroying vital water access to our local pollinators, birds, bees flora and fauna!
19	Yes making it easy or create a sort of call to action for investors that will want to hear about "affordable" real estate in comparison to the coastal areas as well as hype to be part of something new and cool.	
20	Sounds good!	

Q5:
Guiding Principle #2: Clear Tools for Reinvestment and Revitalization It needs to be easy and straightforward for property owners, business owners, and developers to improve and revitalize the District. Revise and develop flexible development standards that reflect community goals and design preferencesand that facilitate normal cycles of investment, improvement and revitalization for all types of properties. Please provide your thoughts on Guiding Principle #2 below.

Q6:
Guiding Principle #3: Diversity of Land Use & Business The Campo Road Corridor will benefit from a diversity of businesses and uses. Allow and encourage a mix of land uses and businesses in the District that attract a variety of visitors and users. Encourage housing as a primary use to provide all-day activation and vibrancy. Please provide your thoughts on Guiding Principle #3 below.

#	Free response to Question 5	Free response to Question 6
21	would agree	would love a dog park with grass in the area, can have an ajoined park with a walking and sitting area. (some of the parks downtown look really nice now that they have redone them.) (example the one off G street)
22	While keeping the charm of CDO intact	
23	Fine	Housing must have sufficient parking or there won't be parking for business customers
24		
25	Any and all help that would be available to navigate through the county ,etc regarding building would be greatly appreciated.	
26	Yes, property owner buy-in though clear, straightforward, and supportive policies is crucial	I dislike the idea of creating more housing. Instead mixed-use should incorporate office space to allow for work/live/play atmosphere that generates a vibrant community
27	we want to keep out business and therefore give them easy avenues for expansion and or remodel their facilities	all the above
All		

Q7:
Guiding Principle #4: Transform Campo Road Campo Road becomes the primary feature that unifies and connects the community, and creates safe, vibrant spaces for social interaction, mobility, and a sense of community. Campo Road features strong vehicular, pedestrian and visual connectivity for safe, efficient and comfortable movement for all modes, ages and abilities. The District utilizes a coordinated parking strategy that provides adequate supply, maximizes efficiency, convenience, and flexibility, and supports existing businesses and future growth. Please provide your thoughts on Guiding Principle #4 below.

Q8:
Which of the following were you most excited to hear about and visualize?

#	Free response to Question 7	Gateways & Streetscape	Trees & Landscaping	Arts & culture	Community Gathering Space	Regulations & guidelines	Mix of land uses/housing	Sidewalk facilities	Safer street crossings	Bike facilities	Coordinated parking strategy	Did not answer Question 8
1												✓
2	I love this, it can't happen soon enough! Remove the walls, connect all of the shopping so it's walk friendly to all areas so we aren't relying on pulling out of one parking area just to pull into another. It would be nice to park, or walk, or bike and never need to get in the car again except leaving.	✓	✓	✓	✓							
3		✓			✓	✓						
4	Safety is key. I often feel safety is lacking when bringing my family to businesses on Campo.		✓	✓		✓						
5			✓			✓						
6					✓							
7			✓		✓						✓	
8		✓			✓	✓						
9												✓
10		✓	✓					✓				
11	Exciting plans.	✓			✓				✓			
12						✓		✓			✓	

Q7:
Guiding Principle #4: Transform Campo Road Campo Road becomes the primary feature that unifies and connects the community, and creates safe, vibrant spaces for social interaction, mobility, and a sense of community. Campo Road features strong vehicular, pedestrian and visual connectivity for safe, efficient and comfortable movement for all modes, ages and abilities. The District utilizes a coordinated parking strategy that provides adequate supply, maximizes efficiency, convenience, and flexibility, and supports existing businesses and future growth. Please provide your thoughts on Guiding Principle #4 below.

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13	v Make it look like El Cajon or La Mesa or even Rancho San Diego	✓	✓			✓						
14	Please DO transform Campo--it needs traffic calming, pedestrian friendliness, and lots of crossings. It divides the district in ways that only cars can currently navigate. Sidewalk extensions, plantings, even an overhead pedestrian walkway, would all improve it.	✓	✓			✓						
15	This only works if there is still capacity for the flow of the volume of traffic we have, if we loose the median in the middle of campo road and we tighten the road crossings for pedestrians we stop the traffic flow of the large trucks the deliver supplies to the businesses in the area. It seems like the planning is not including the real needs of the people using this area, it is not just pedestrians, the businesses need the truckers so without working this out the plan will just squeeze out the businesses that are there that need deliveries. This could kill off the area if the truckers are not accomodated with better access along Kenora Drive and San Juan St to reach and deliver to those businesses. We also may need a way to ensure that the flow from Kenora Drive to Kenwood doesn't clog as it is now. People are not stopping to a full stop at the stop signs by the freeway and so often it is hard to pull out from Kenora onto Kenwood for the steady flow of cars coming along Kenwood. If round-abouts are being considered we would kill off the truckers delivering supplies.		✓	✓	✓							
16		✓	✓		✓							

Q7:
Guiding Principle #4: Transform Campo Road Campo Road becomes the primary feature that unifies and connects the community, and creates safe, vibrant spaces for social interaction, mobility, and a sense of community. Campo Road features strong vehicular, pedestrian and visual connectivity for safe, efficient and comfortable movement for all modes, ages and abilities. The District utilizes a coordinated parking strategy that provides adequate supply, maximizes efficiency, convenience, and flexibility, and supports existing businesses and future growth. Please provide your thoughts on Guiding Principle #4 below.

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#	Free response to Question 7	Gateways & Streetscape	Trees & Landscaping	Arts & culture	Community Gathering Space	Regulations & guidelines	Mix of land uses/housing	Sidewalk facilities	Safer street crossings	Bike facilities	Coordinated parking strategy	Did not answer Question 8
17	I hope the parking strategy includes tearing down the existing physical barriers between parking lots and connecting pedestrian walkways near the retail buildings without directing foot traffic out to the street and back.	✓							✓		✓	
18	Campo Road honors our local ENVIRONMENT, including our NATIVE PLANTS, Native pollinators, birds, bees AND our NATIVE WATER COURSE> For example, the VIBRANT SPACES MUST include NATIVE PLANTS FOR THE POLLINATORS AND also support our local WATERCOURSE. The PARKING ageas must integrate the NATIVE PLANTS to offset the gas fumes from cars!, in accordance with federal, state, county and local laws policites and regulations. These plants also protect from the ANNUAL WILDFIRES as well as support our Pollinators		✓	✓	✓							
19	I personally feel that we should encompass the Casa de Oro look and feel with community art, logos, landscape and sculptures with the old world or early settler look and feel ie. mission san diego look (without the religious point of view of course) Old school mixed with modern touches.	✓	✓	✓								
20	Good.	✓	✓			✓						

Q7:
Guiding Principle #4: Transform Campo Road Campo Road becomes the primary feature that unifies and connects the community, and creates safe, vibrant spaces for social interaction, mobility, and a sense of community. Campo Road features strong vehicular, pedestrian and visual connectivity for safe, efficient and comfortable movement for all modes, ages and abilities. The District utilizes a coordinated parking strategy that provides adequate supply, maximizes efficiency, convenience, and flexibility, and supports existing businesses and future growth. Please provide your thoughts on Guiding Principle #4 below.

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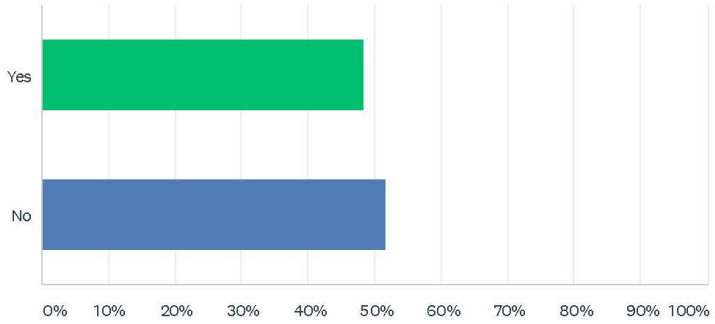
Which of the following were you most excited to hear about and visualize?

#	Free response to Question 7	Gateways & Streetscape	Trees & Landscaping	Arts & culture	Community Gathering Space	Regulations & guidelines	Mix of land uses/housing	Sidewalk facilities	Safer street crossings	Bike facilities	Coordinated parking strategy	Did not answer Question 8
21	expanding the freeway enterances is going to be helpful in the up coming years as more homes are being build in our area and more business are coming in, the hopes are more visitor to our area, along with more people living here, therefore more traffic should be expected.	✓	✓				✓					
22	Sounds good		✓		✓							
23	Parking and safety for SV Academy students to walk to and from school is important		✓		✓			✓				
24		✓	✓					✓				
25	This would be a great improvement.	✓			✓			✓	✓			
26	Coordinated parking is a great phrase. The never ending parking lots are an eye sore	✓	✓		✓						✓	
27		✓	✓	✓			✓	✓	✓		✓	
All		16	18	6	13	8	2	6	4	0	5	2

Q1 Did you participate in the December 17, 2020 Alternatives Community Workshop?

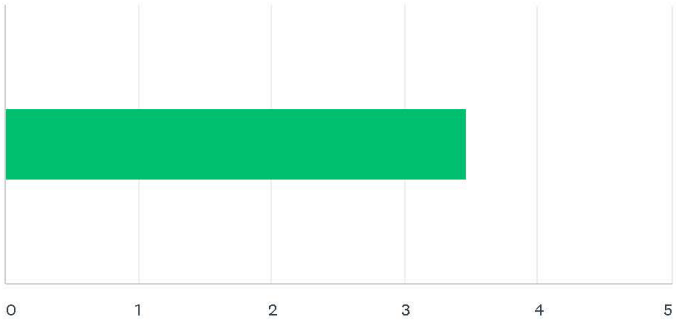
Answered: 31 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	48.39%	15
No	51.61%	16
TOTAL		31

Q2 Please rate how desirable this type of vertical mixed-use building is for the Campo Road Corridor.

Answered: 24 Skipped: 7



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	3	83	24
Total Respondents: 24			

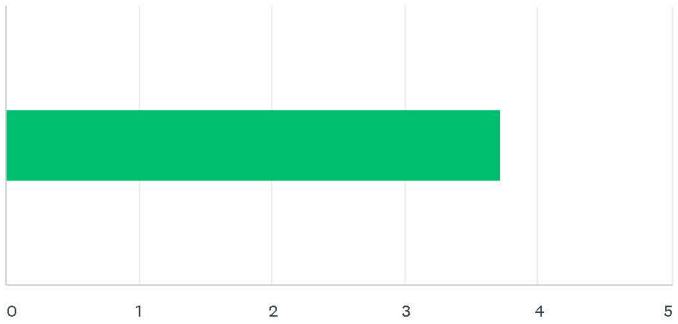
Q3 Please share any additional feedback about the image above.

Answered: 10 Skipped: 21

#	RESPONSES	DATE
1	Think that there sb height restrictions and a consistent but not uniform Spanish style.	1/17/2021 7:44 PM
2	There is a "vibrant feel" to this photo because of the lighted retail space along the sidewalk and the awnings over the balconies in the upper levels.	1/17/2021 4:56 PM
3	I find that is a decent looking structure design but doesn't project a modern feel. Remember this concept must take us well into the next 30-50 years. Doesn't look first-rate.	1/13/2021 7:34 AM
4	On street parking should be eliminated in favor of bike lanes. Provide adequate parking behind buildings.	1/7/2021 10:26 AM
5	I like the mixed use and the architectural style.	12/20/2020 3:10 PM
6	Building up to the sidewalk, especially with multi level structures, makes the street feel crowded and less inviting. Creating a buffer of several feet between the buildings and sidewalk makes the space feel more open and inviting for pedestrians. Streets are for more than shopping. Residents want places to stop and converse with neighbors, sit, and relax. Building up to the sidewalk minimizes these important opportunities within communities.	12/17/2020 7:02 PM
7	This is residential dominated but could be commercial with some residential	12/17/2020 5:54 PM
8	Would like more shops, restaurants, galleries. Less residential.	12/17/2020 5:51 PM
9	Needs protected bike lane.	12/17/2020 5:49 PM
10	The buildings seem too tall and blocky for the area. It doesn't fit the "feel" of the community.	12/17/2020 3:41 PM

Q4 Please rate how desirable these types of horizontal and vertical mixed-use buildings are for the Campo Road Corridor.

Answered: 24 Skipped: 7



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	4	89	24
Total Respondents: 24			

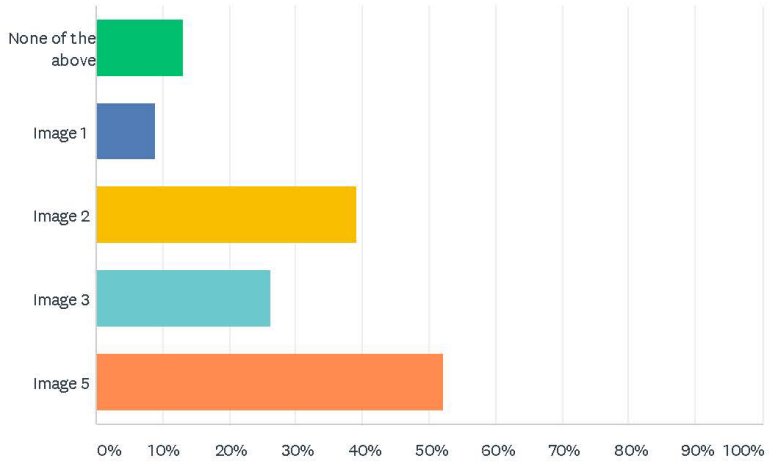
Q5 Please share any additional feedback about the images above.

Answered: 8 Skipped: 23

#	RESPONSES	DATE
1	Since the name is Casa De Oro - a consistent but not uniform Spanish style would be preferred	1/17/2021 7:44 PM
2	I like how the residential buildings offer their own parking lots "nestled" in between. And I like how there is privacy for the residences with the ground floor residences not being at sidewalk level. I would hate to live in a ground floor residence where people walking by could look right into my window and/or ground-floor patio.	1/17/2021 4:56 PM
3	Cleaner lines but not futuristic or noteworthy enough.	1/13/2021 7:34 AM
4	I like this as well, it would help to separate the business from the residential.	12/20/2020 3:10 PM
5	Building up to the sidewalk, especially with multi level structures, makes the street feel crowded and less inviting. Creating a buffer of several feet between the buildings and sidewalk makes the space feel more open and inviting for pedestrians. Streets are for more than shopping. Residents want places to stop and converse with neighbors, sit, and relax. Building up to the sidewalk minimizes these important opportunities within communities.	12/17/2020 7:02 PM
6	I like the idea of residential on the same lot with commercial uut want it to work architecturally.	12/17/2020 5:54 PM
7	Don't like that at all.	12/17/2020 5:51 PM
8	I like that there's a visual "rest" with the height, but having a taller building on the corner feels intrusive. The textures on the building are better than plain stucco and give it more personality.	12/17/2020 3:41 PM

Q6 Please select the types of vertical mixed-use buildings you would like to see in the Campo Road corridor.

Answered: 23 Skipped: 8



ANSWER CHOICES	RESPONSES	
None of the above	13.04%	3
Image 1	8.70%	2
Image 2	39.13%	9
Image 3	26.09%	6
Image 5	52.17%	12
Total Respondents: 23		

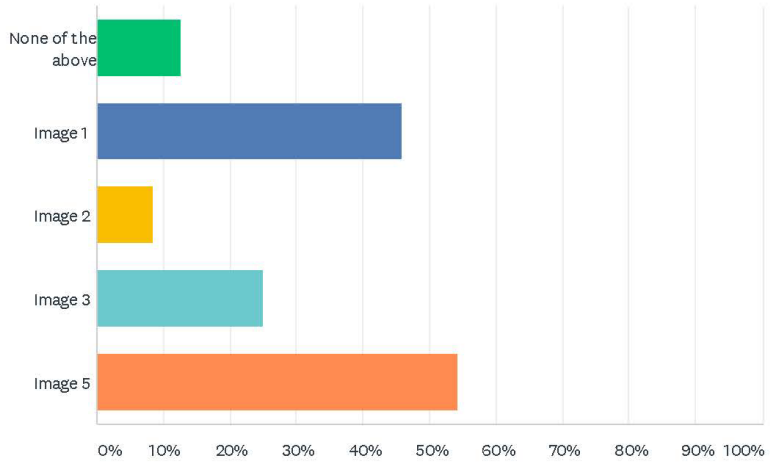
Q7 Please share any additional feedback about the image above.

Answered: 6 Skipped: 25

#	RESPONSES	DATE
1	Again mix use is great, but prefer a consistent but not uniform Spanish style to blend with Santa Sophia church's architecture.	1/17/2021 7:44 PM
2	I think Casa de Oro would benefit from having a combination of modern architecture (like pictured in these examples) as well as some mission style architecture. I chose the photo because of the plantings that break up the brick/walk.	1/17/2021 4:56 PM
3	One of the biggest things for me about the mixed use is incorporating rooftop spaces or balconies to enhance views from the new structures.	12/20/2020 3:10 PM
4	Same as above. Tall buildings built up to the sidewalk reduce opportunities for strolling and community interactions	12/17/2020 7:02 PM
5	More open space, gathering spaces, outdoor dining, views of the areas landscape.	12/17/2020 5:51 PM
6	Modern architecture will not suit the community. Although I wouldn't mind seeing a nod to the mid-century styles since the area was quickly developed in that era.	12/17/2020 3:41 PM

Q8 Please select the types horizontal mixed-use buildings you would like to see in the Campo Road corridor.

Answered: 24 Skipped: 7



ANSWER CHOICES	RESPONSES	
None of the above	12.50%	3
Image 1	45.83%	11
Image 2	8.33%	2
Image 3	25.00%	6
Image 5	54.17%	13
Total Respondents: 24		

Q9 Please share any additional feedback about the images above.

Answered: 6 Skipped: 25

#	RESPONSES	DATE
1	It would be good to mix up the different Spanish styles so it looks like it has been here for many years and not new construction.	1/17/2021 7:44 PM
2	I chose this style because it looks like the ground-floor residences have some privacy with the wall/plantings.	1/17/2021 4:56 PM
3	I chose this mainly because of the Spanish style.	12/20/2020 3:10 PM
4	Tall buildings built up to the sidewalk reduce opportunities for strolling and community interactions	12/17/2020 7:02 PM
5	More resembling old San Diego, mission-style.	12/17/2020 5:51 PM
6	I like how both buildings incorporate existing buildings yet are able to blend modern-style buildings within the same block.	12/17/2020 3:41 PM

Q11 Please share any any additional comments and suggestions regarding the use of incentives to facilitate the development of community spaces (e.g. preference or limits to particular incentives).

Answered: 9 Skipped: 22

#	RESPONSES	DATE
1	I think you need to find a balance of the different incentive. We do no want to make the streets dark with too tall buildings. Also, it's California and people drive everywhere, so there needs to be adequate parking. Placement of taller building needs to be strategic so it does not block attractive sight lines, but could provide a benefit like shade.	1/17/2021 7:50 PM
2	I don't feel qualified to answer this question because I am not a land owner nor do I lease business space. This would be an excellent question to ask the land owners in Casa de Oro and even the businesses that lease space in Casa de Oro. Please reach out to the land owners via phone if they do not respond to a letter. It is vital that they provide input early on during the process.	1/17/2021 5:00 PM
3	Concerned that more buildings will increase people and more traffic. Traffic is a major concern. There is one one road.	1/7/2021 1:58 PM
4	Reduced parking is ALWAYS a mistake. Whether residential or commercial, people need places to park the cars.	1/7/2021 10:29 AM
5	I would love to see businesses have incentive to come in and develop this space. There are obvious tradeoffs, but more open space on the ground would be worth a few more floors on the buildings.	12/20/2020 3:14 PM
6	As a member of the neighborhood community, Im not interested in developers profits, Im interested in the best use of the space for now and for future generations. Developers accepting a lower profit margin is also a very viable option, and better in the long term for the community.	12/17/2020 7:09 PM
7	SmLl and medium seems appropriate. Depending on lot sizes in the corridor	12/17/2020 5:57 PM
8	I prefer the limited height of 3 storie	12/17/2020 5:56 PM
9	#2	12/17/2020 5:52 PM

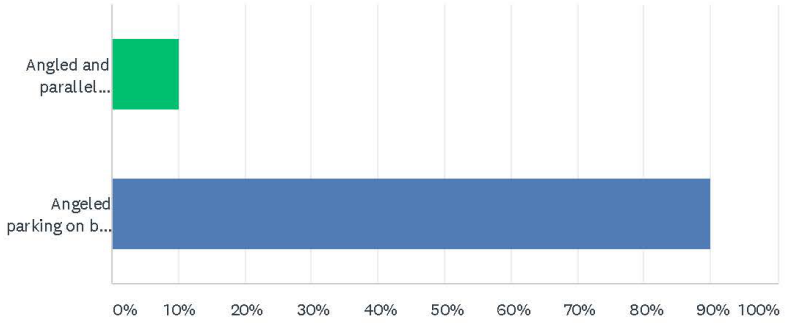
Q13 Are there any other features or amenities that you would like to see incentivized?

Answered: 9 Skipped: 22

#	RESPONSES	DATE
1	Don't know.	1/17/2021 7:50 PM
2	public art is very important BUT very subjective so one must be careful when deciding on what is considered art. I believe it should be once again futuristic, designed based on the areas culture or iconic messaging and if it will be a moving artwork or bench etc…run my solar.	1/13/2021 7:38 AM
3	Something needs to be done about the homeless problem. It doesn't matter how much development you do if homeless people continue invade public spaces because they have no where else to go.	1/7/2021 10:29 AM
4	Definitely art work, entryway monuments. Shared public parking and overall community improvement/ safety (security guards, good lighting, etc.)	12/20/2020 3:14 PM
5	Increase density designation, assign the corridor a transit node, streamline entitlement and CEQA process for privately initiated projects that meet the CDO Vision and have the COSD vacate portions of the ROW	12/17/2020 7:37 PM
6	Non-commercial public space, such as public plazas, which are an essential part of the culture in Spain. Spain is the country many of the streets in the area are named after, so why not use this inspiration to further this connection.	12/17/2020 7:09 PM
7	This key to creating public space and community identity	12/17/2020 5:57 PM
8	More arts!	12/17/2020 5:52 PM
9	Mixed-use with ground floor retail and transit amenities	12/17/2020 5:51 PM

Q14 Do you prefer:

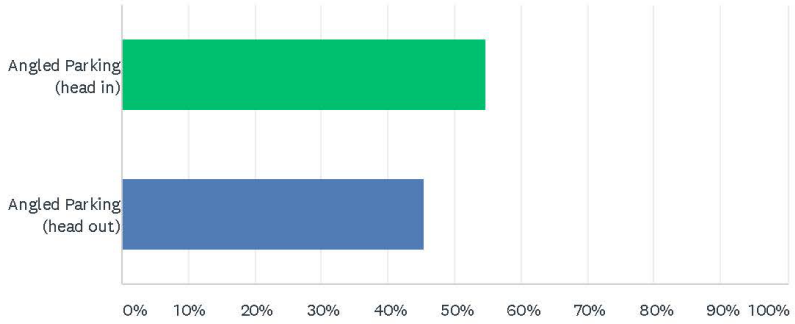
Answered: 20 Skipped: 11



ANSWER CHOICES	RESPONSES	
Angled and parallel parking	10.00%	2
Angeled parking on both sides	90.00%	18
TOTAL		20

Q15 Do you prefer:

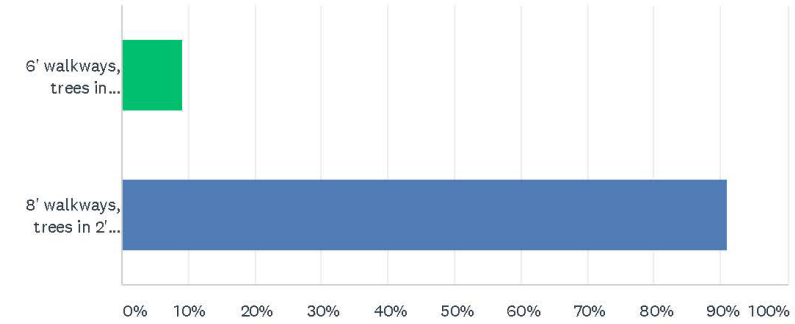
Answered: 22 Skipped: 9



ANSWER CHOICES	RESPONSES	
Angled Parking (head in)	54.55%	12
Angled Parking (head out)	45.45%	10
TOTAL		22

Q16 Do you prefer:

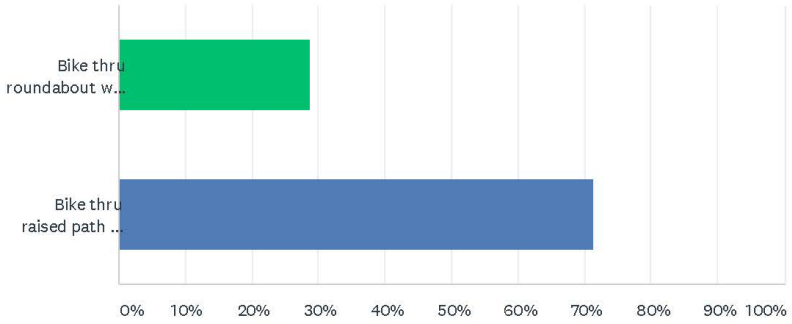
Answered: 22 Skipped: 9



ANSWER CHOICES	RESPONSES	
6' walkways, trees in parking lane	9.09%	2
8' walkways, trees in 2' parkway	90.91%	20
TOTAL		22

Q17 Do you prefer:

Answered: 21 Skipped: 10



ANSWER CHOICES	RESPONSES	
Bike thru roundabout w/ cars	28.57%	6
Bike thru raised path OR roundabout	71.43%	15
TOTAL		21

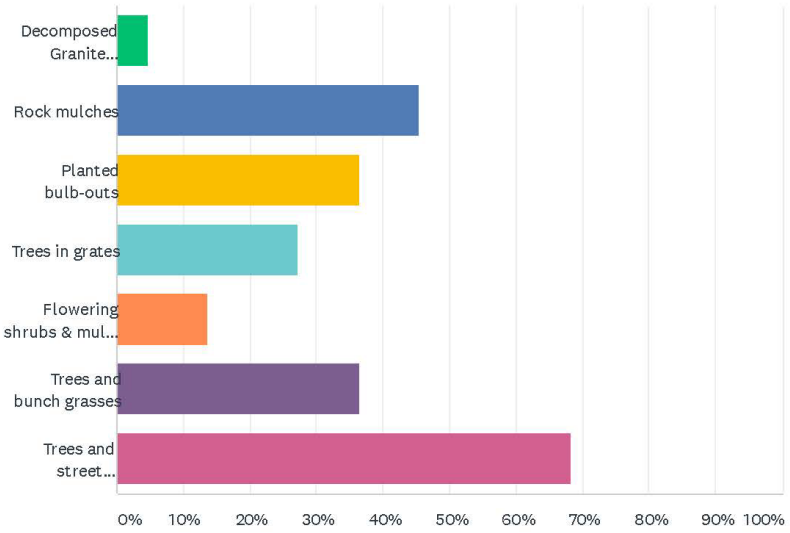
Q18 Please provide any additional comments about the choices above.

Answered: 7 Skipped: 24

#	RESPONSES	DATE
1	I think the roundabout sb at Campo and Bonita to help reveal Santa Sophia church which is currently hidden.	1/17/2021 8:07 PM
2	No roundabout. Horrible idea	1/17/2021 5:27 PM
3	back in for electric cars as per 2035 rule that all cars are electric. plus safer for loading.	1/13/2021 7:43 AM
4	Really don't like any of these ideas. I don't want to see the street narrowed. HATE the idea of a roundabout	1/7/2021 2:07 PM
5	If possible, reduce or eliminate street parking. It's ALWAYS hazardous. Include more parking, even multi-level parking behind buildings.	1/7/2021 10:35 AM
6	Do not start and abruptly stop bike lanes. Provide predictable conditions for cyclists and motorists	12/17/2020 7:37 PM
7	Roundabouts are safe and far more efficient than stoplights or signs. They are also a standard feature in many Spanish, European, and Mediterranean cities	12/17/2020 7:23 PM

Q19 Select the sidewalk treatments you would like to see along Campo Road:

Answered: 22 Skipped: 9



ANSWER CHOICES	RESPONSES	
Decomposed Granite Patterns	4.55%	1
Rock mulches	45.45%	10
Planted bulb-outs	36.36%	8
Trees in grates	27.27%	6
Flowering shrubs & mulch, no trees	13.64%	3
Trees and bunch grasses	36.36%	8
Trees and street furnishings	68.18%	15
Total Respondents: 22		

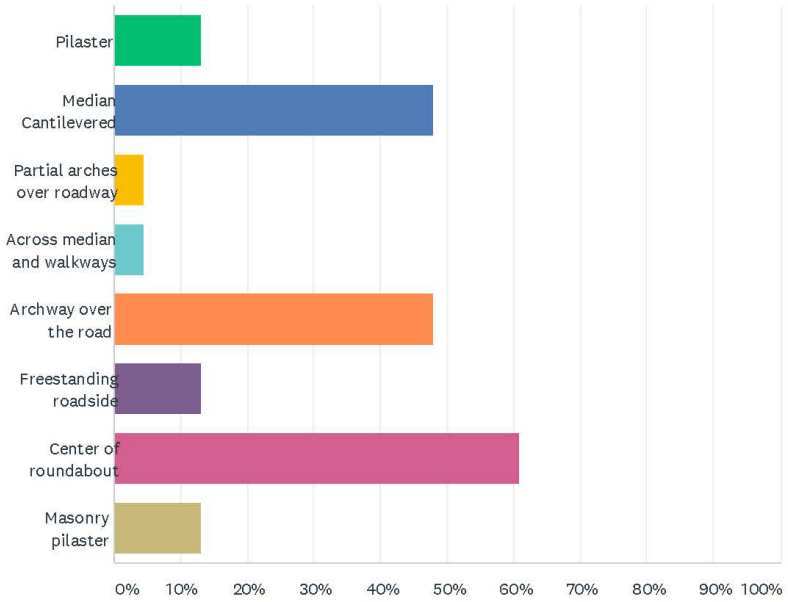
Q20 Please provide any additional comments about the choices above.

Answered: 7 Skipped: 24

#	RESPONSES	DATE
1	Native plants (such as grasses) if not done correctly become unruly in a very short time. Be sure that care and maintenance is a major factor in landscape selection.	1/17/2021 8:07 PM
2	If trees are used, they should be planted so as not to block the view of the name of the businesses. I do like trees because they provide shade, add the element of nature to the area, and can be decorated with twinkly lights to add ambiance to the area at night.	1/17/2021 5:07 PM
3	we would want to see desert native plants with low water usage but with iconic trees (think cyprus as they are popular in the area or other native trees.	1/13/2021 7:43 AM
4	Rocks and DG encourage miscreants to easily cause damage. Care should be taken to provide landscapes that are more secure.	1/7/2021 10:35 AM
5	Public seating and shade trees encourage community and are aesthetically pleasing	12/17/2020 7:23 PM
6	Native plants	12/17/2020 5:54 PM
7	I hope to see native and waterwise plants within the design. As much as I would like street furnishings to promote community, I feel like they'll end up vandalized or used by the homeless as beds.	12/17/2020 4:02 PM

Q21 Select the entry monuments and gateways that you would like to see along Campo Road:

Answered: 23 Skipped: 8



ANSWER CHOICES	RESPONSES	
Pilaster	13.04%	3
Median Cantilevered	47.83%	11
Partial arches over roadway	4.35%	1
Across median and walkways	4.35%	1
Archway over the road	47.83%	11
Freestanding roadside	13.04%	3
Center of roundabout	60.87%	14
Masonry pilaster	13.04%	3
Total Respondents: 23		

Q22 Please provide any additional comments about the choices above.

Answered: 10 Skipped: 21

#	RESPONSES	DATE
1	Style sb consistent with the architecture selected.	1/17/2021 8:07 PM
2	No roundabout	1/17/2021 5:27 PM
3	I like the round-about sign the best, but fear that it is also expensive, so I also gave my 2nd and 3rd choices.	1/17/2021 5:07 PM
4	The entrance gateways will be the most important decision to make as they will be the most discussed and scrutinized as the first design esthetic one sees upon arrival.	1/13/2021 7:43 AM
5	I would love to live in a cute “village” but I don’t believe that unless you get rid of the type of stores that are there now, it’s not going to happen. Let improve what we have and not try to curate a fairy land	1/7/2021 2:07 PM
6	East end of project is a perfect location for roundabout. BIG mistake if we don't do this.	1/7/2021 10:35 AM
7	This will be a very important part of redeveloping community character!	12/20/2020 3:19 PM
8	Roundabout is the best	12/17/2020 7:23 PM
9	More reflective of the area.	12/17/2020 5:54 PM
10	I heard we used to have a big sign in the area. Does anyone know what it looked like? Perhaps the new sign can reference that one. No dumb fonts, please.	12/17/2020 4:02 PM

Q24 Please share any additional feedback about the image above.

Answered: 9 Skipped: 22

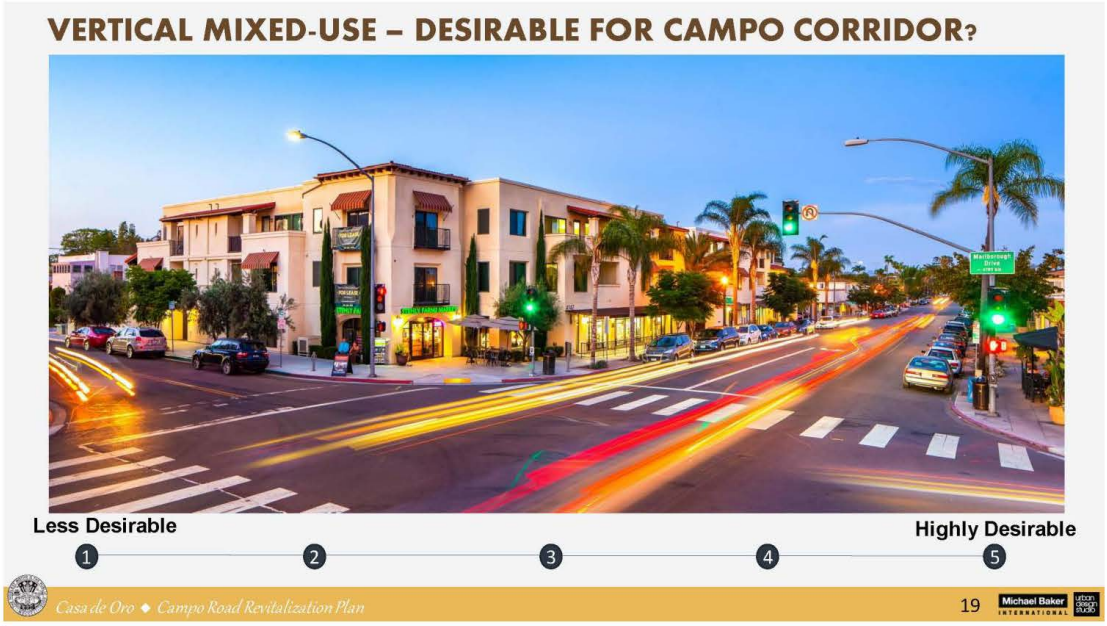
#	RESPONSES	DATE
1	No roundabout	1/17/2021 5:27 PM
2	Yes! I like how the buildings are different heights and "ages". I liked the paved median and the signage. The roundabout at the end of the street is inviting and helps to create a "drive to" destination rather than a "drive through" destination.	1/17/2021 5:07 PM
3	I like all these ideas except the paved median which should offer more nature (plants, trees) so it doesn't appear so bare.	1/13/2021 7:43 AM
4	Single story commercial is a waste of space unless there is parking on the roof.	1/7/2021 10:35 AM
5	I like most of the elements. I would do without the paved median and do a landscaped one instead and utilize the one story commercial space better (mixed use or more commercial space altogether)	12/20/2020 3:19 PM
6	Theres a lot going on here, some that is desireable, some that is not, so its hard to assign an overall rating, so Ive given it a low score. To break it down: NO on tall buildings,and no on the lack of sidewalk setbacks YES on the roundabout, street trees, and 1 story sidewalk cafes	12/17/2020 7:23 PM
7	I like parking being on the side of medians providing buffer for bikeway in center of median.	12/17/2020 6:02 PM
8	Yes, let's revitalize this area. CDO is so beautiful & has so much potential!:)	12/17/2020 5:54 PM
9	This will only work if the current amount of driveways are reduced. Otherwise, a paved median would cause more traffic.	12/17/2020 4:02 PM

Q25 Please provide any additional comments or feedback that you would like to be considered for the Campo Road Corridor Revitalization Plan.

Answered: 10 Skipped: 21

#	RESPONSES	DATE
1	I just want to say thank you to the county employees involved with this project. Great job so far!!	1/17/2021 8:09 PM
2	My concern is that we end up like El Cajon with gentrification and pushing long standing small businesses owned by low income minority families. CDO is a school town, so it should cater to families that are reflected in our school populations. I like the Adobe and mission styles. That way we're reflecting our area's past.	1/17/2021 7:30 PM
3	I hope a roundabout is something that is not just pushed into casa de oro because of the alliance. It's an awful idea. Too much traffic.	1/17/2021 5:28 PM
4	I think it is vitally important to reach out to the business owners and more importantly the land owners. I know that they have not been easy to reach, but this is too important of a project for them NOT to participate in. Thank you. This has been super informative.	1/17/2021 5:09 PM
5	I worked in Little Italy back in the late 90s and literally saw it develop in front of my office window. Our company designed the Little Italy sign and remember the process of how that worked. I feel as a resident now of this neighborhood that the design result of this revitalization is very important. Whatever transpires should be something that gets the people of San Diego proper as well tourists to Southern California talking about how this revitilaztion project was created with the future in mind, timeless designs, public art that is smart, useful, energy efficient. Architecture that reflects California with it's historic "gold mine era/mission look and feel with a timeless design that reflects ideas that will not age in say 30 years from now. Lastly, we should not forget that we need to address and fulfill the needs of all the people of Casa de Oro. We see a large number of African Americans, Arab, and Latino community residents that often are overlooked in these upgrades to neighborhoods and might not have the opportunity to submit their ideas. Diversity is the future.	1/13/2021 7:52 AM
6	A roundabout at Campo & Granada with a central monument would be fantastic! Parking behind and above buildings must not reduce the number of available spaces. Bike lanes must not be shared with vehicle traffic. Low cost and group housing should be included in any plan to help reduce the homeless population. Other disincentives for homeless occupancy of public spaces must be part of the design and implementation. Surfaces at street level should be coated in materials that reject typical paint used to create graffiti.	1/7/2021 10:43 AM
7	Thank you for keeping the community involved.	12/20/2020 3:19 PM
8	Thank you for including the community in this discussion. Ive owned property in several areas that have undergone development, and all too often the developers walk away with handsome profits while the community is stuck with shortsighted shortcuts to increase their profits. Lets not do that this time. Casa De Oro is a great community with much potential, but lets not lose sight of the fact that development should ultimately serve the community first and foremost, not simply be seen as an opportunity for big profits for developers, who ultimately dont have to live with the results of their shortcuts.	12/17/2020 7:29 PM
9	Need a direct connection to Estrella Park to the north.	12/17/2020 5:56 PM
10	I would like to see the plans/designs for the multiple entranceways/markers for the East & West Ends of Campo are. It's such a great thoroughfare b/t the on/off ramps to the 94.	12/17/2020 5:55 PM

POLL QUESTION 1 - SLIDE 19



1. Is the vertical mixed-use building desirable for the Campo Road Corridor?

1. Less Desirable	(4) 10%
2.	(4) 10%
3. Moderately Desirable	(9) 22%
4.	(13) 32%
5. Highly Desirable	(11) 27%

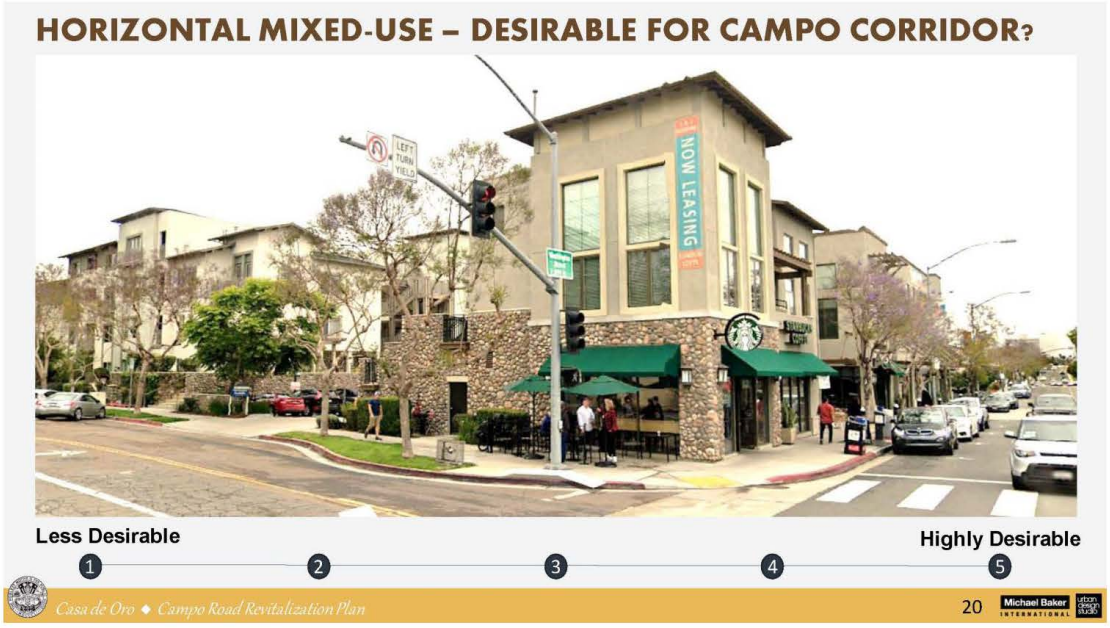
Average rating of 3.5.

81% rated as moderately to highly desirable.

59% rated as highly desirable.

20% rated vertical mixed-use as less desirable. This is possibly due to the architecture, height, mass, or other features of the particular examples.

POLL QUESTION 2 - SLIDE 20



1. Is the horizontal mixed-use building desirable for the Campo Road Corridor?

1. Less Desirable	(3) 7%
2.	(2) 5%
3. Moderately Desirable	(9) 22%
4.	(17) 41%
5. Highly Desirable	(10) 24%

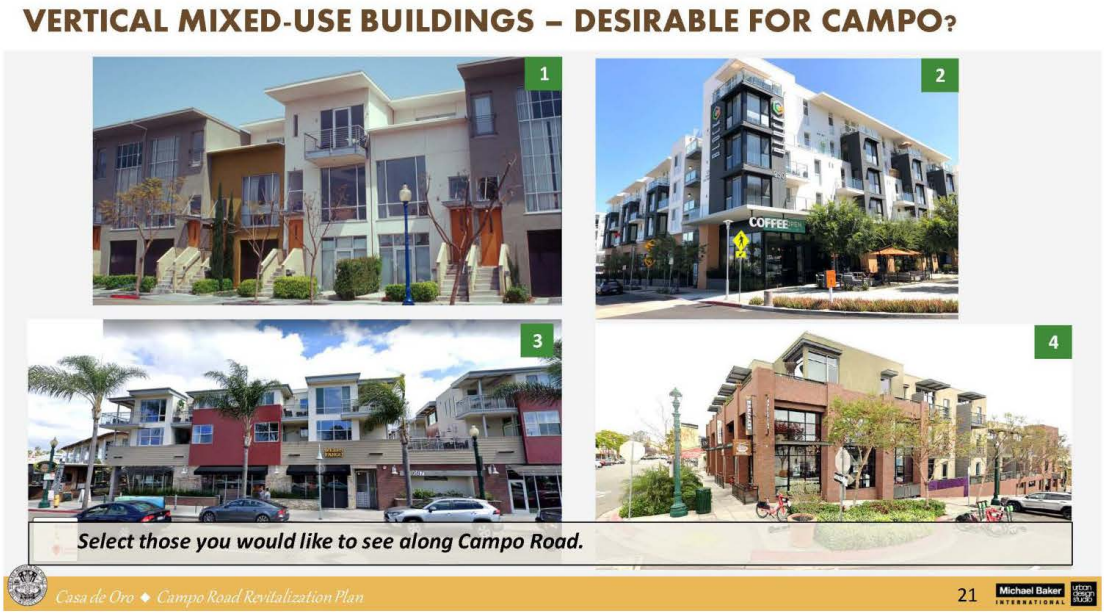
Average rating of 3.7.

87% rated as moderately to highly desirable.

65% rated as highly desirable.

12% were hesitant to support horizontal mixed-use buildings and uses.

POLL QUESTION 3 - SLIDE 21



1. Please select the buildings you feel are desirable for Campo Road. (Multiple choice)

Building #1	(9/38) 24%
Building #2	(15/38) 39%
Building #3	(14/38) 37%
Building #4	(23/38) 61%

Support for all example buildings.

Strong preferences for building #4.

Notable features of building 4 include: 3-story, 3rd story Stepback/deck, Brick, High percentage glass, Awnings, Blade and awning signage

Least favored was Building #1. Features or differences from the other buildings include: most residential/least active ground floor; stoops & stairs; oldest building of the group.

POLL QUESTION 4 - SLIDE 22

1. Please select the buildings you feel are desirable for Campo Road. (Multiple choice)

Building #1	(22/46) 48%
Building #2	(10/46) 22%
Building #3	(13/46) 28%
Building #4	(23/46) 50%

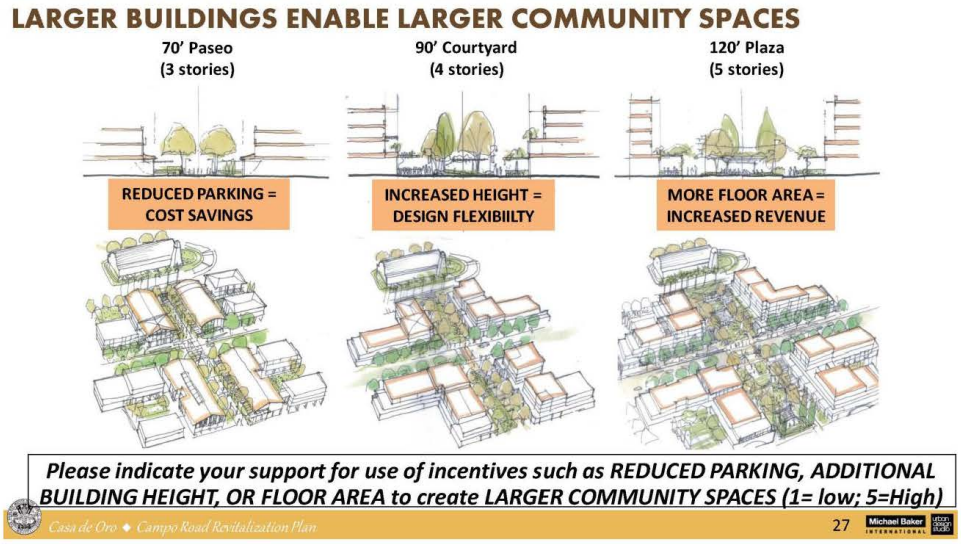
Support for all example buildings.

Strong preferences for buildings #1 and #4.

Notable features of buildings 1 and 4 include: Traditional/Spanish architecture, tile roofs, 2-4 stories, varied heights, 2-story commercial heights, (blue skies/sunny exposures)

Notable features of buildings 2 and 3 include: Direct residential access to street; unusual architecture, 2-4 stories, varied heights, 2-story commercial heights, (gray skies/shadowed exposures)

POLL QUESTION 5 - SLIDE 27



1. Please indicate your support for the use of incentives such as reduced parking, additional building height, or additional floor area to create larger community spaces.

1 - Low support	(4) 10%
2 -	(1) 3%
3 - Moderate support	(10) 25%
4 -	(11) 28%
5 - High support	(14) 35%

Average rating of 3.7.

88% rated as moderately to highly desirable.

63% rated as highly desirable.

13% expressed resistance or hesitancy about the use of incentives. Could be from a lack of understanding, clarity of the potential system, and/or concerns about the impact of the incentives versus the benefits to the community.

Concerns over building height could also explain more moderate support vs. the high support for the general concept and application of incentives for community benefits in the subsequent poll question #6.

POLL QUESTION 6 - SLIDE 28

OTHER POTENTIAL COMMUNITY BENEFITS THAT MIGHT BE INCENTIVIZED:

- Examples:
  - Public art
  - Shared/public parking
  - Enhanced security
  - Design assistance

Please indicate your support for use of incentives for these types of community benefits (1= low; 5=High):

Casa de Oro ◆ Campo Road Revitalization Plan 28 Michael Baker urban design studio

1. Please indicate your support for the use of incentives for other types of community benefits, such as public art or shared parking.

1. Low Support	(0) 0%
2.	(1) 2%
3. Moderate Support	(6) 13%
4.	(13) 29%
5. High Support	(25) 56%

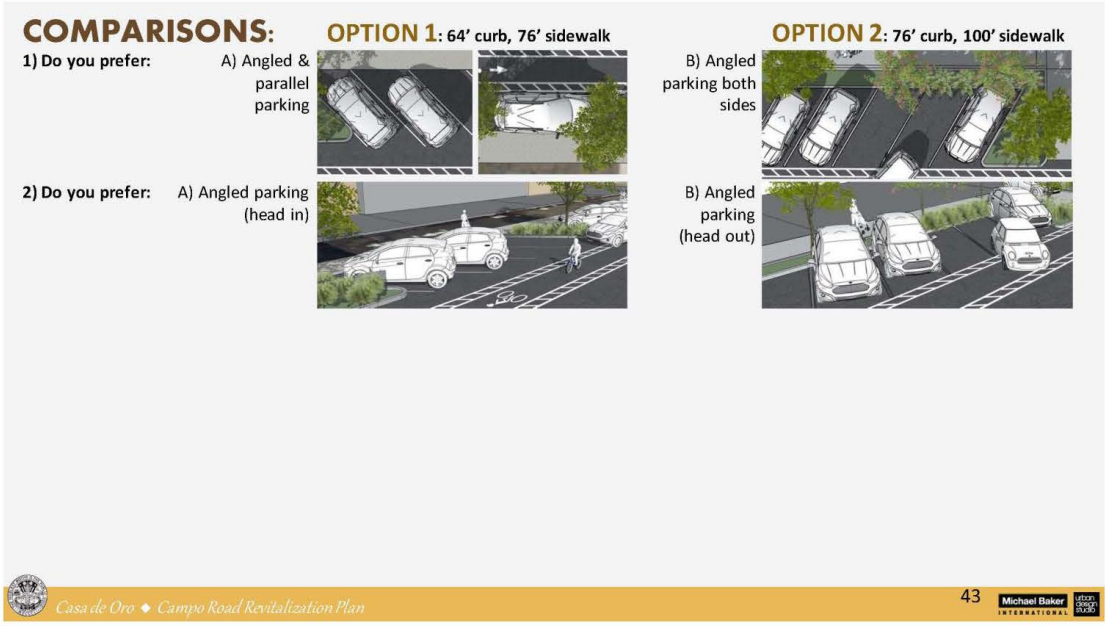
Average rating of 4.4.

98% rated as moderate support or higher.

85% rated as highly desirable.

The considerably higher rankings in this second related question may suggest an increased understanding and acceptance to the overall concept of incentives for community benefits in general. The relatively lower ratings in the previous question #5 specifically about open space may have garnered greater support if asked in the reverse order.

POLL QUESTIONS 7 & 8 - SLIDE 43



1. Do you prefer:

Angled & parallel parking	(5) 13%
Angled parking both sides	(35) 88%

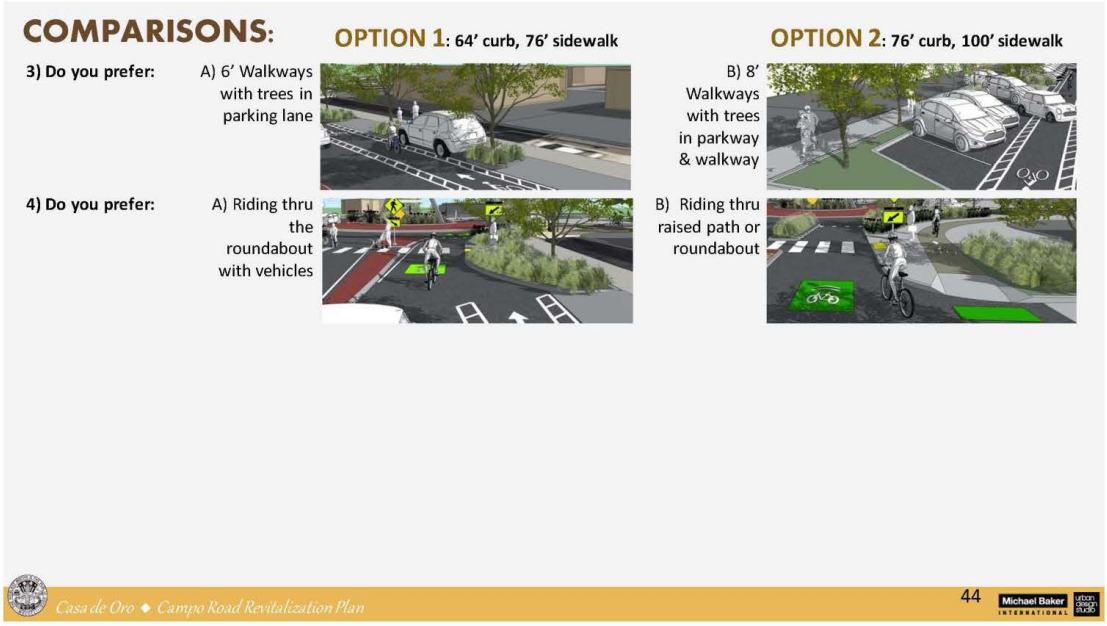
2. Do you prefer:

Angled parking (head in)	(15) 38%
Angled parking (head out)	(25) 63%

The results show a clear preference (82% of responses) for the Option 2 Full ROW improvement options which provide more space and amenities, particularly Angled Parking on Both Sides of Campo and Back-In/Head-Out Parking.

Strong (63% to 38%) support and preference for the Back-in/Head-out diagonal parking option, likely due to understanding of the safety benefits for drivers, pedestrians and bicyclists.

POLL QUESTIONS 9 & 10 - SLIDE 44



1. Do you prefer:

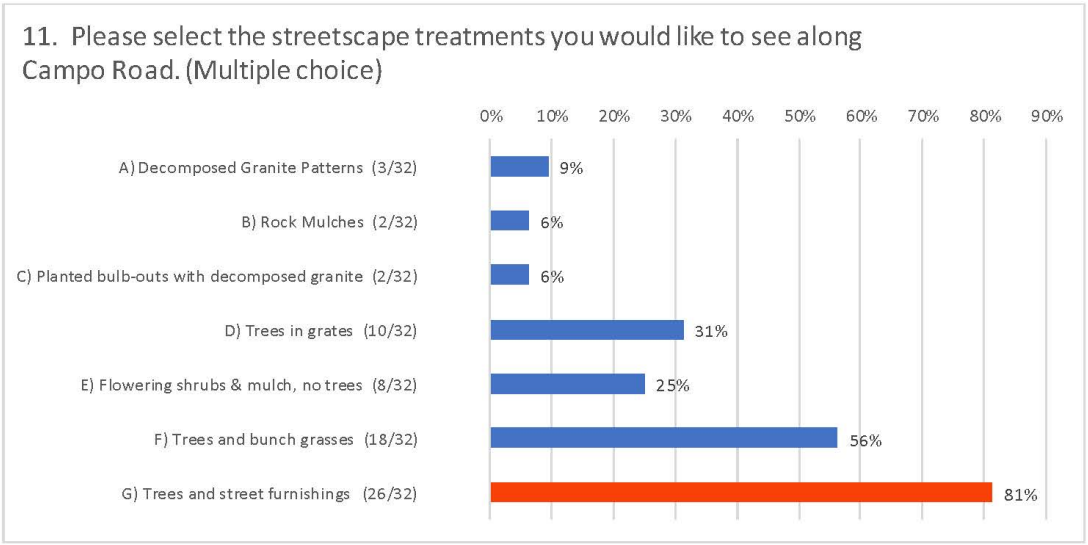
6' walkways with trees in parking lane	(7) 18%
8' walkways with trees in parkway & walkway	(32) 82%

2. Do you prefer:

Riding thru the roundabout with vehicles	(7) 18%
Riding thru raised path or roundabout	(32) 82%

The results show a clear preference (82% to 18%) for the full ROW improvement options which provide more space and amenities including wider sidewalks with street trees in the parkway between the curb and sidewalk; and the separate bike path option through the roundabout.

POLL QUESTION 11 - SLIDE 45



Strong support and preference for treatment example G)Trees and street furnishings, the most comprehensive and extensive level of treatments along the walkways.

POLL QUESTION 12 - SLIDE 46

1. Please select the types of entry monuments you would like to see along Campo Road. (Multiple choice)

A) Pilaster	(7/36) 19%
B) Cantilevered median sign	(4/36) 11%
C) Partial arches over roadway	(1/36) 3%
D) Across median and walkways	(3/36) 8%
E) Archway over the road	(15/36) 42%
F) Freestanding roadside	(5/36) 14%
G) Center of roundabout	(26/36) 72%

Strong support and preference for the center roundabout sculpture option appropriate for the possible roundabout at eastern end of the corridor at the intersection of Campo and Granada and Casa de Oro Boulevard, with clear second preference for archway over the road option, potentially more appropriate at the western end of the corridor near the intersection of Campo and Kenwood. Pilaster monuments were a relatively distant third choice.

POLL QUESTION 13 - SLIDE 47

1. Please rate how much you would like to see similar improvements and features in the Campo Road Corridor.

1. Less support	(2) 5%
2.	(4) 10%
3. Moderate support	(5) 12%
4.	(10) 24%
5. More support	(20) 49%

Average rating of 4.0.

85% rated as moderately to highly desirable.

73% rated as highly desirable.

15% expressed less support or hesitancy.

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APPENDIX B
TRAFFIC ANALYSIS AND PARKING ASSESSMENT
Casa de Oro Specific Plan

Prepared for:
County of San Diego
Planning & Development Services
5510 Overland Avenue
San Diego, CA 92123

July 28, 2021

5050 Avenida Encinas, Suite 260, Carlsbad, CA 92008
Office: 760.476-9193 | Fax: 760.476.9198
Contact: robertdavis@mbakerintl.com
JN 175688

Michael Baker
INTERNATIONAL

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Michael Baker
INTERNATIONAL

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Attachment C: Parking Survey Data
Attachment D: Existing Traffic Signal Timing Worksheets
Attachment E: Existing Conditions Synchro Worksheets
Attachment F: Parking Utilization Worksheets
Attachment G: Horizon Year 2035 With Project HCM Worksheets

1 INTRODUCTION

This report summarizes existing transportation conditions within the Casa de Oro community located in the Valle de Oro Community Planning Area of San Diego County. The study area is focused along an approximate ¾-mile section of Campo Road in the commercial corridor between Granada Avenue and Rogers Road and includes five (5) stop-controlled intersections, seven (7) signalized intersections, and ten (10) roadway segments.

The existing conditions assessment considers the physical roadway conditions and intersection operations as well as the current pedestrian, bicycle, and transit facilities within the study area. In addition to the traffic operations analysis, this report also documents the parking conditions for on-street and off-street parking facilities serving the non-residential uses within the study area. A parking survey was conducted which collected existing inventory data as well as parking utilization in 1-hour increments for 7 hours. Existing parking supply rates and actual parking demand rates were calculated and compared to parking ratios per County code requirements.

1.1 STUDY AREA

The study evaluates the following twelve (12) intersections during the AM and PM peak hours within the study area:

1. Kenwood Drive / SR-94 Eastbound Ramps (All-Way Stop)
2. Kenwood Drive / SR-94 Westbound Ramps (All-Way Stop)
3. Kenwood Drive / Kenora Drive (One-Way Stop)
4. Campo Road / Kenwood Drive (Traffic Signal)
5. Campo Road / Conrad Drive (Traffic Signal)
6. Campo Road / Bonita Street (Traffic Signal)
7. Campo Road / Barcelona Street (Traffic Signal)
8. Campo Road / Cordoba Avenue (Two-Way Stop)
9. Campo Road / Granada Avenue / Casa de Oro Boulevard (Traffic Signal)
10. Campo Road / Agua Dulce Boulevard / SR-94 WB On-Ramp (Traffic Signal)
11. Campo Road / SR-94 Eastbound Ramps (Traffic Signal)
12. Agua Dulce Boulevard / SR-94 Westbound Off-Ramp (One-Way Stop)

The study also evaluates the following ten (10) roadway segments for average daily (24-hour) traffic volumes in the vicinity of the project site:

A. Kenwood Drive – SR-94 Westbound Ramps to Kenora Drive
B. Campo Road – Kenwood Drive to Conrad Drive
C. Campo Road – Conrad Drive to Bonita Street
D. Campo Road – Bonita Street to Barcelona Street
E. Campo Road – Cordoba Street to Granada Avenue / Casa De Oro Boulevard
F. Campo Road – Granada Avenue / Casa De Oro Boulevard to Agua Dulce Boulevard
G. Conrad Drive – Campo Road to San Juan Street
H. Barcelona Street – Dolores Street to Campo Road
I. Casa De Oro Boulevard – East of Ramona Drive

J. Ramona Drive – South of Casa De Oro Boulevard

Exhibit 1 shows the study intersections, roadway segments, and extents of the parking survey.

1.2 SURROUNDING ROADWAY NETWORK

The characteristics of the roadway system in the vicinity of the project site are described below:

Campo Road is oriented in the east-west direction and is classified as a 4-lane Boulevard with Intermittent Turn Lanes (4.2B) per the Valle de Oro Mobility Element. A two-way-left-turn-lane is provided approximately 400 feet west of Kenwood Drive to approximately 230 feet east of Granada Avenue / Casa de Oro Boulevard with left-turn turn lanes at signalized intersections. Within the study area, the posted speed limit is 35 MPH between Kenwood Drive and Granada Avenue / Casa de Oro Boulevard; 40 MPH between Granada Avenue / Casa de Oro Boulevard and Agua Dulce Boulevard and 45 MPH south-east of the SR-94. On-street parallel parking is prohibited in both directions within the study area. Class II bike lanes and sidewalks are provided on both sides of the roadway.

Kenwood Drive is oriented in the northeast-southwest direction and is classified as a 4-lane Major Road with Intermittent Turn Lanes (4.1B) between the SR-94 and Campo Road per the Valle de Oro Mobility Element. On-street parallel parking is prohibited in both directions within the study area. Class II bike lanes are provided on both sides of the roadway. Sidewalks are provided on the east side between the SR-94 eastbound ramps and Kenora Drive only.

Conrad Drive is oriented in the north-south direction and is classified as a 2-lane Light Collector (2.2E) per the Valle de Oro Mobility Element. There are two lanes in the northbound direction immediately north of Campo Road, which taper to a single lane north of San Juan Street (approximately 550') Within the study area, the posted speed limit is 35 MPH. On-street parallel parking is allowed intermittently in both directions between Campo Road and Spring Valley Middle School. There are no bike lanes provided within the study area. Sidewalks are provided on both sides of the roadway between Campo Road and Spring Valley Middle School. There are no sidewalks north of the school.

Barcelona Street is oriented in north-south direction and is classified as a 2-lane Light Collector (2.2E) per the Valle de Oro Mobility Element. Barcelona Street provides a connection for residents south of SR-94 to the commercial corridor via a freeway underpass. Within the study area, the posted speed limit is 25 MPH. On-street parallel parking is allowed in both directions between north and south of Campo Road. There are no bike lanes provided within the study area and sidewalks are provided on both sides of the roadway.

Casa de Oro Boulevard is oriented in the east-west direction and is an unclassified Local Public Road. Within the study area, the posted speed limit is 25 MPH. There are no bike lanes provided within the study area and sidewalks are provided on both sides of the roadway between Campo Road and San Juan Street only.

Exhibit 2 shows the Valle de Oro Community Plan Mobility Element Network. **Attachment A** shows the associated Mobility Element Network Map and Matrix.

1.3 FIELD WORK AND DATA COLLECTION

A detailed field review was conducted in November 2019 to establish current traffic conditions and included an examination of the following factors:

- Lane widths and intersection geometries
- Intersection traffic control and signal phasing at signalized locations
- Crosswalk inventory and ADA compliance
- Posted speed limits
- Bike and sidewalk facilities
- Transit facilities

To determine the existing operations of the study intersections and roadway segments, peak hour intersection movement counts and directional roadway segment traffic counts were collected on Tuesday, November 12, 2019.

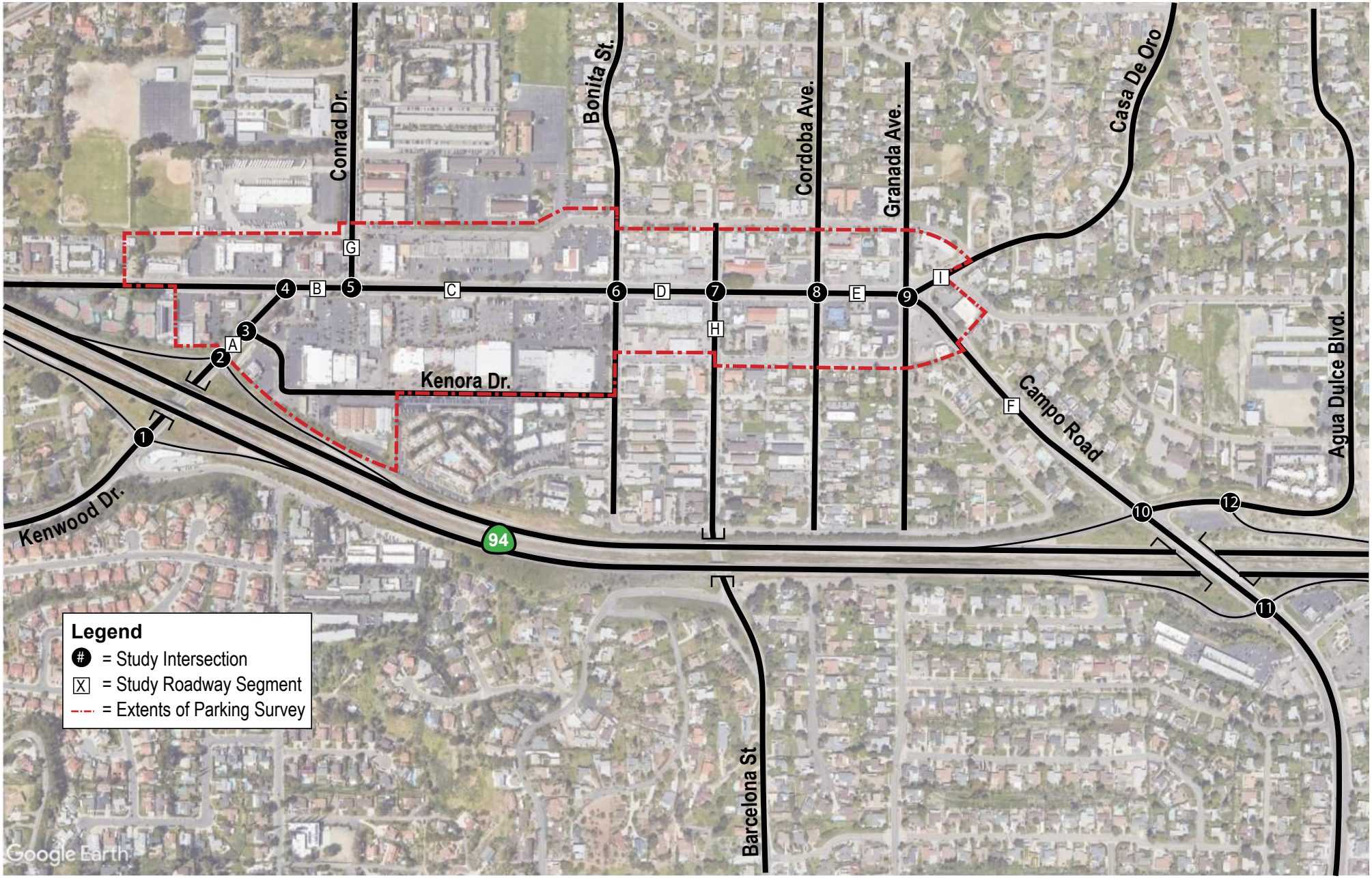
Morning (AM) peak period counts were generally collected between 7:00 AM to 9:00 AM and evening (PM) peak period counts were generally collected from 4:00 PM to 6:00 PM. The counts used in this analysis represent the highest hour within the peak periods counted for each intersection.

Of the 12 24-hour roadway segments counts, 10 locations were broken down into axle specific classifications (i.e. passenger vehicle, bus, 2/3/4+ axle trucks). For the purposes of this analysis, roadway segment counts were converted to passenger car equivalents (PCE's).

Detailed traffic count data is provided in **Attachment B**.

A detailed parking inventory and parking utilization survey was conducted for on-street and off-street parking facilities serving non-residential land uses on Friday, December 13, 2019. The parking inventory identified regular parking spaces, ADA spaces, time-restricted spaces, and other posted restricted parking. The parking utilization survey was conducted over a 7-hour period from 10:00 AM to 5:00 PM where parking data was collected at 1-hour intervals.

Detailed parking utilization data is contained in **Attachment C**.



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January 2020
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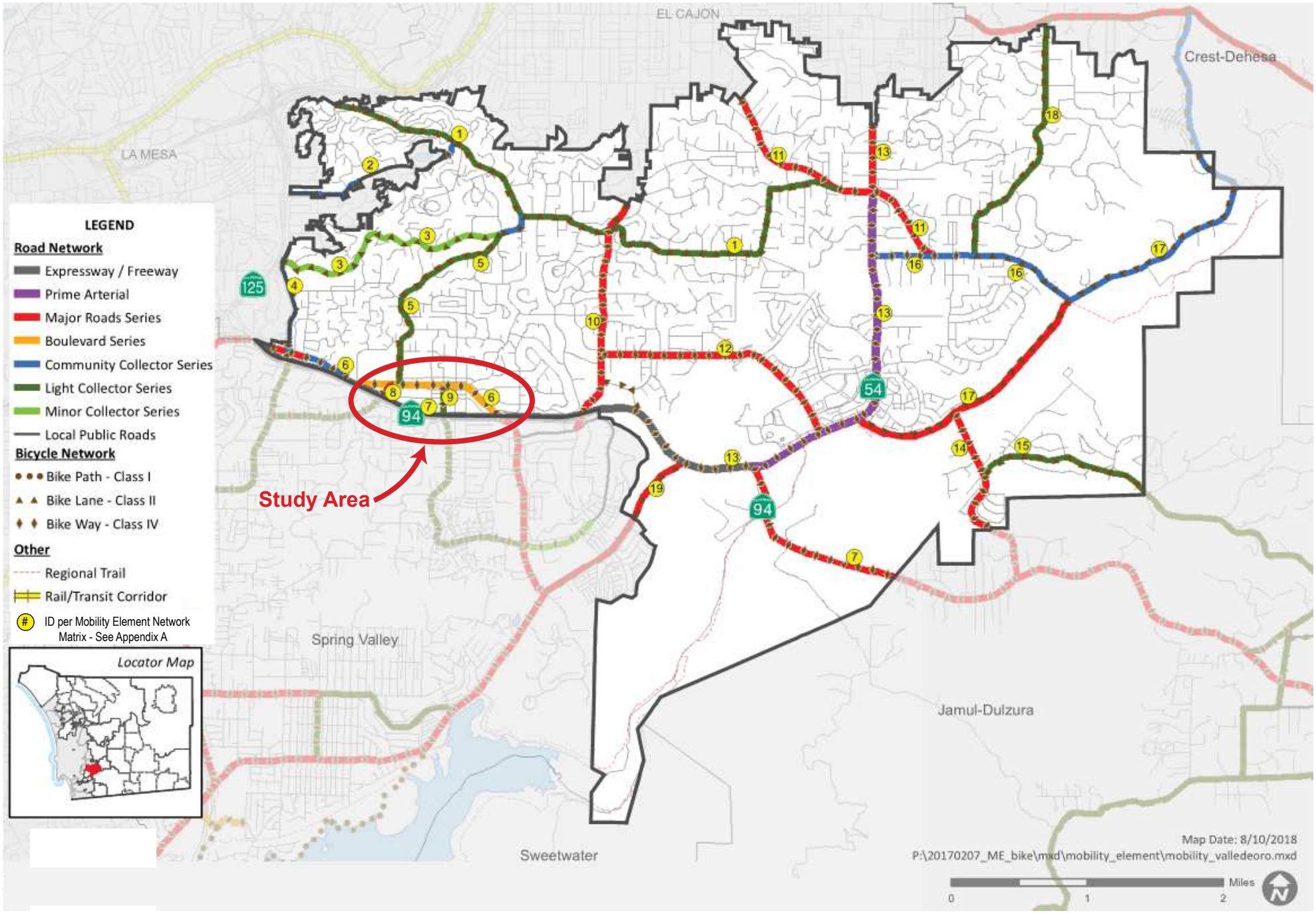
Study Area

Exhibit 1



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Valle de Oro Mobility Element Network

January 2020
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Exhibit 2

2 EXISTING TRAFFIC CONDITIONS

2.1 ROADWAY SEGMENT EVALUATION

2.1.1 Roadway Segment Analysis Methodology

The basis for roadway segment analysis is the relationship between the measured daily traffic volume and the Level of Service (LOS) capacity thresholds established according to roadway classifications. The analysis results provide a planning-level assessment of whether a segment is under, approaching, or over capacity. The County of San Diego has adopted level of service "D" or better as acceptable operating conditions for roadway segments; however, the Valle de Oro Mobility indicates LOS "F" is accepted for the segment of Campo Road between Kenwood Drive and Conrad Drive. **Table 1** presents the roadway segment capacity thresholds by LOS contained in the San Diego County Public Road Standards.

TABLE 1- LOS CRITERIA FOR ROADWAY SEGMENTS

Mobility Element Roads		No. of Travel Lanes	Maximum Level of Service Capacity (ADT)				
			LOS A	LOS B	LOS C	LOS D	LOS E
Expressway (6.1)		6	36,000	54,000	70,000	86,000	108,000
Prime Arterial (6.2)		6	22,000	37,000	44,600	50,000	57,000
Major Road	With Raised Medians (4.1A)	4	14,800	24,700	29,600	33,400	37,000
	With Intermittent Turn Lanes (4.1B)		13,700	22,800	27,400	30,800	34,200
Boulevard	With Raised Medians (4.2A)	4	18,000	21,000	24,000	27,000	30,000
	With Intermittent Turn Lanes (4.2B)		16,800	19,600	22,500	25,000	28,000
Community Collector	With Raised Medians (2.1A)	2	10,000	11,700	13,400	15,000	19,000
	With Continuous Turn Lanes (2.1B)		3,000	6,000	9,500	13,500	19,000
	With Intermittent Turn Lanes (2.1C)		3,000	6,000	9,500	13,500	19,000
	With Improvement Options (2.1D)		3,000	6,000	9,500	13,500	19,000
	No Median (2.1E)		1,900	4,100	7,100	10,900	16,200
Light Collector	With Raised Medians (2.2A)	2	3,000	6,000	9,500	13,500	19,000
	With Continuous Turn Lanes (2.2B)		3,000	6,000	9,500	13,500	19,000
	With Intermittent Turn Lanes (2.2C)		3,000	6,000	9,500	13,500	19,000
	With Improvement Options (2.2D)		3,000	6,000	9,500	13,500	19,000
	No Median (2.2E)		1,900	4,100	7,100	10,900	16,200
	With Reduced Shoulders (2.2F)		5,800	6,800	7,800	8,700	9,700
Minor Collector	With Raised Medians (2.3A)	2	3,000	6,000	7,000	8,000	9,000
	With Intermittent Turn Lanes (2.3B)		3,000	6,000	7,000	8,000	9,000
	No Median (2.3C)		1,900	4,100	6,000	7,000	8,000
Non-Mobility Element Roads		**No. of Travel Lanes**	**Maximum Level of Service Capacity (ADT)**				
			LOS A	**LOS B**	**LOS C**	**LOS D**	**LOS E**
Residential Collector		2	-	-	4,500	-	-
Rural Residential Collector		2	-	-	4,500	-	-
Residential Road		2	-	-	1,500	-	-
Rural Residential Road		2	-	-	1,500	-	-
Residential Cul-de-Sac or Loop Road		2	-	-	200	-	-

Source: County of San Diego Public Road Standards (March 2012)

2.1.2 Roadway Segment Level of Service

Exhibit 3 shows the street segment classification within the study area.

Level of Service (LOS) for roadway segments are calculated based on the capacity of the roadway determined by the existing functional classification and existing daily traffic volumes. Existing traffic counts were converted to passenger car equivalents (PCE's) using the following PCE factors from the SANDAG *2050 Regional Travel Demand Model Documentation* (2011):

- Passenger Car = 1.0
- 2-Axle Truck = 1.3
- 3-Axle Truck = 1.5
- 4+ Axle Trucks = 2.5

Table 2 summarizes existing conditions average daily traffic level of service for all study roadway segments.

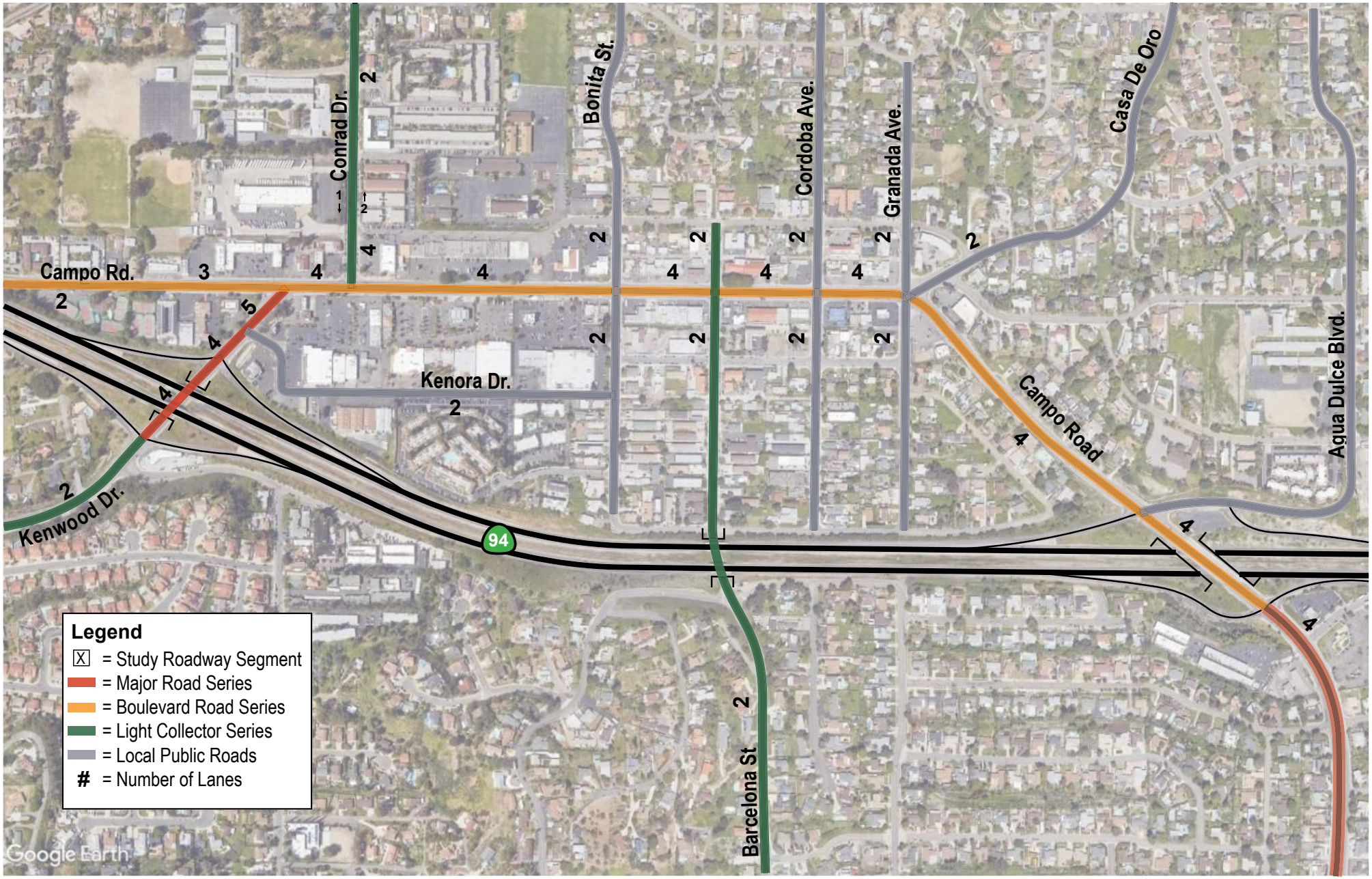
TABLE 2 - EXISTING CONDITIONS ROADWAY SEGMENT LOS

Roadway	Segment	Classification	No. Lanes	LOS E Capacity [1]	Existing		
					ADT	V/C	LOS
Kenwood Dr.	SR-94 WB Ramps to Kenora Dr.	Major Road with Intermittent Turn Lanes (4.1B)	4	34,200	23,207	0.68	C
Campo Rd.	Kenwood Dr. to Conrad Dr.	Boulevard with Intermittent Turn Lanes (4.2B)	4	28,000	24,390	0.87	D
	Conrad Dr. to Bonita St.	Boulevard with Intermittent Turn Lanes (4.2B)	4	28,000	19,890	0.71	C
	Bonita St. to Barcelona St.	Boulevard with Intermittent Turn Lanes (4.2B)	4	28,000	17,708	0.63	B
	Cordoba St. to Granada Ave./Casa de Oro Blvd.	Boulevard with Intermittent Turn Lanes (4.2B)	4	28,000	13,227	0.47	A
	Granada Ave./Casa de Oro Blvd. to Agua Dulce Blvd.	Boulevard with Intermittent Turn Lanes (4.2B)	4	28,000	14,282	0.51	A
Conrad Dr.	Campo Rd. to San Juan St.	Light Collector (2.2E)	2	16,200	6,007	0.37	C
Barcelona St.	Dolores St. to Campo Rd.	Light Collector (2.2E)	2	16,200	6,975	0.43	C
Casa de Oro Blvd.	East of Ramona Dr.	Residential Collector	2	4,500	2,572	Under Capacity	
Ramona Dr.	South of Casa de Oro Blvd.	Residential Collector	2	4,500	1,286	Under Capacity	

Note: Deficient roadway segment operations shown in **bold**
LOS= Level of Service
ADT= Average Daily Traffic
V/C= Volume to Capacity Ratio
[1] Capacity for a Residential Collector reflects LOS C thresholds per Non-Mobility Element Roads shown in Table 1

As shown in **Table 2**, all study roadway segments are currently operating at an acceptable level of service (LOS D or better) for Existing conditions.

Roadway segment level of service standards based on daily traffic are generally used as long-range planning guidelines to determine the roadway capacity and classification and are not always accurate indicators of roadway performance. Typically, the performance and level of service of a roadway segment is heavily influenced by traffic flows during the peak hour and the ability of intersections to accommodate peak hour flows. Therefore, peak hour operating conditions at the signalized and unsignalized intersections within the study area were also evaluated.



Not to Scale

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Street Segment Classifications

Exhibit 3

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2.2 INTERSECTION EVALUATION

2.2.1 Intersection Analysis Methodology

Level of Service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the travel lanes approaching the intersection, the volume of traffic using the intersection, and the average vehicle delay. The intersection analysis conforms to the operational analysis methodology outlined the *Highway Capacity Manual (HCM 6th Edition)* and performed utilizing the *Synchro 10* traffic analysis software.

The *HCM* analysis methodology describes the operation of an intersection using a range of level of service from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle for study intersections as shown in **Table 3**.

For signalized intersections, signal timing data and parameters such as cycle lengths, splits, clearance intervals, etc. were obtained from the current signal timing data sheets provided by City staff and incorporated into the Synchro model (see **Attachment D**). Synchro reports average vehicle delay for a signalized intersection, which correspond to a particular LOS, to describe the overall operation of an intersection.

Unsignalized intersection LOS for all-way stops is based on the average vehicle delay for all approaches. Average vehicle delay for one-way or two-way stop-controlled intersections is influenced by available gaps in traffic flow on the non-controlled approaches and LOS is based on the approach with the worst delay.

The County of San Diego has adopted level of service "D" or better as acceptable operating conditions for intersections.

TABLE 3 - LEVEL OF SERVICE & DELAY RANGE

Level of Service	Control Delay (seconds/vehicle)		Description
	Signalized Intersections	Unsignalized Intersections	
A	≤ 10.0	≤ 10.0	Operates with very low delay and most vehicles do not stop.
B	> 10.0 to 20.0	> 10.0 to 15.0	Operates with good progression with some restricted movements.
C	> 20.0 to 35.0	>15.1 to 25.0	Operates with significant number of vehicles stopping with some backup and light congestion.
D	> 35.0 to 55.0	> 25.0 to 35.0	Operates with noticeable congestion, longer delays occur, and many vehicles stop.
E	> 55.0 to 80.0	> 35.1 to 50.0	Operates with significant delay, extensive queuing and unfavorable progression.
F	> 80.0	> 50.0	Operates at a level that is unacceptable to most drivers. Arrival rates exceed capacity of the intersection. Extensive queuing occurs.

Source: Highway Capacity Manual (HCM) 6th Edition.

2.2.2 Peak Hour Intersection Level of Service

Exhibit 4 shows the Existing study intersection lane geometry. **Exhibit 5** shows the AM and PM peak hour traffic volumes at the study intersections.

Table 2 summarizes existing conditions AM/PM peak hour level of service for all study intersections. Detailed analysis sheets are contained in **Attachment E**.

TABLE 4 - EXISTING AM/PM PEAK HOUR INTERSECTION LOS

Study Intersection	Traffic Control	Existing Conditions					
		AM			PM		
		Delay[1]	-	LOS	Delay[1]	-	LOS
1 - Kenwood Drive / SR-94 EB Ramps	AWSC	28.5	-	D	31.5	-	D
2 - Kenwood Drive / SR-94 WB Ramps	AWSC	**79.3**	-	**F**	23.9	-	C
3 - Kenwood Drive / Kenora Drive	OWSC	**106.8**	-	**F**	**69.1**	-	**F**
4 - Campo Road / Kenwood Drive	Signal	25.8	-	C	26.1	-	C
5 - Campo Road / Conrad Drive	Signal	23.6	-	C	17.7	-	B
6 - Campo Road / Bonita Street	Signal	13.2	-	B	12.0	-	B
7 - Campo Road / Barcelona Street	Signal	18.3	-	B	12.7	-	B
8 - Campo Road / Cordoba Avenue	TWSC	**270.4**	-	**F**	21.9	-	C
9 - Campo Road / Granada Avenue / Casa de Oro Blvd	Signal	**72.6**	-	**E**	23.5	-	C
10 - Campo Road / Agua Dulce Blvd / SR-94 WB On-Ramp	Signal	**68.5**	-	**E**	**61.2**	-	**E**
11 - Campo Road / SR-94 EB Ramps	Signal	33.9	-	C	33.7	-	C
12 - Agua Dulce Blvd / SR-94 WB Off-Ramp	OWSC	**256.0**	-	**F**	14.3	-	B

Note: Deficient intersection operation indicated in **bold**.
[1] Average seconds of delay per vehicle.
LOS = level of service.
AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
OWSC = One-Way Stop Control

As shown in **Table 2**, six study intersections are currently operating at an acceptable level of service (LOS D or better) for Existing conditions and the following intersections are currently operating at a deficient level of service (LOS E or F):

2. Kenwood Drive / SR-94 Westbound Ramps (AM Peak Hour Only)
3. Kenwood Drive / Kenora Drive (AM & PM Peak Hours)
8. Campo Road / Cordoba Avenue (AM Peak Hour Only)
9. Campo Road / Granada Avenue / Casa de Oro Boulevard (AM Peak Hour Only)
10. Campo Road / Agua Dulce Boulevard / SR-94 WB On-Ramp (AM & PM Peak Hours)
12. Agua Dulce Boulevard / SR-94 WB Off-Ramp (AM Peak Hour Only)

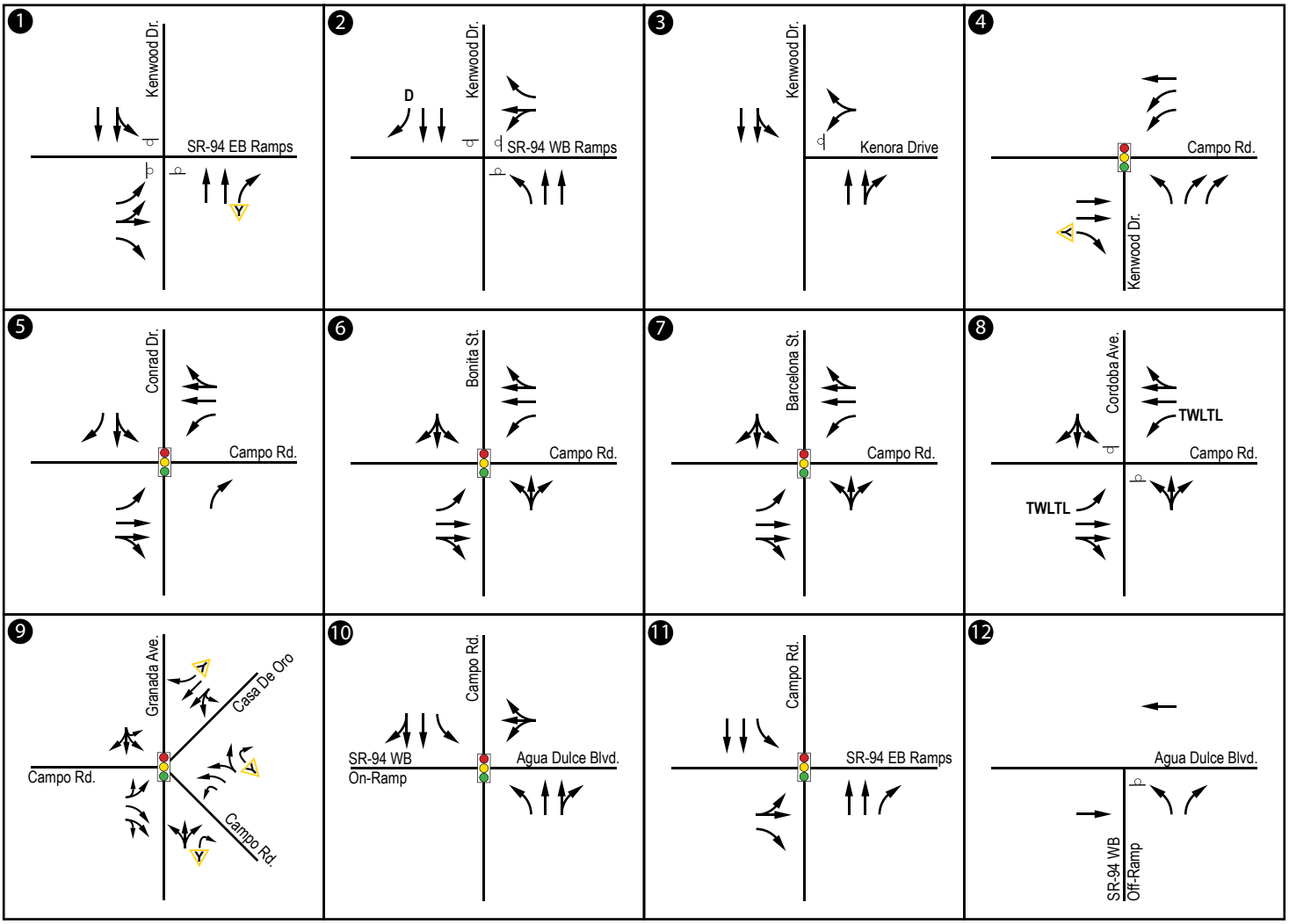
While not reflected in the level of service analysis, there are other abnormal intersection features that effect the operations of several intersections as described below.

At the intersection of Campo Road and Kenwood Drive, there are two uncontrolled driveways in the middle of the intersection on the north side. There are no signal heads, crosswalks, or pedestrian signal heads for these driveways, and they are signed as “right-turn only” for exiting vehicles. There are also no turn movements designated into the driveways from the eastbound or northbound directions (i.e. no

pavement markings or signal heads). The westbound approach can turn right into these driveways from the through-lane. The existing peak hour counts showed a total 3 vehicles in the AM peak hour and 1 vehicle in the PM peak hour entering the driveways. There were no vehicles exiting the driveways during either peak hour. While these unusual driveway related access features and traffic movements exist, the intersection analysis shows this location operating at acceptable levels of service during the AM and PM peak hours.

Similarly, the intersection of Campo Road at Conrad Drive has an uncontrolled driveway on the south side of the intersection with no signal heads, crosswalks, or pedestrian signal heads. While the driveway is signed as a "right-turn only" for exiting vehicles, existing peak hour counts show 2 vehicles making illegal turn movements (1 through, and 1 left-turn) out of the driveway. There were 562 vehicles in the AM peak hour and 612 vehicles in the PM peak hour turn right out of the driveway. There was a total of 20 vehicles in the AM peak hour and 42 vehicles in the PM peak hour entering the driveway. There are designated turn movements from all approaches to enter the driveway. While these unusual driveway related access features and traffic movements exist, the intersection analysis shows this location operating at acceptable levels of service during the AM and PM peak hours.

Lastly, the intersection of Campo Road at Granada Avenue / Casa de Oro Boulevard is a signalized 5-legged intersection. The through movement is prioritized for Campo Road (north-westbound to westbound and westbound to south-eastbound) movements. Granada Avenue and Casa de Oro Boulevard are considered minor streets and the signal is split-phased for these approaches; that is each individual minor street approach is given a protected green signal indication for all movements at that approach. While traffic flows well through the intersection, the amount of time needed to serve all movements requires a long cycle-length and this causes vehicles at the intersection to experience long average delays and a deficient level of service during the AM peak hour.



Legend

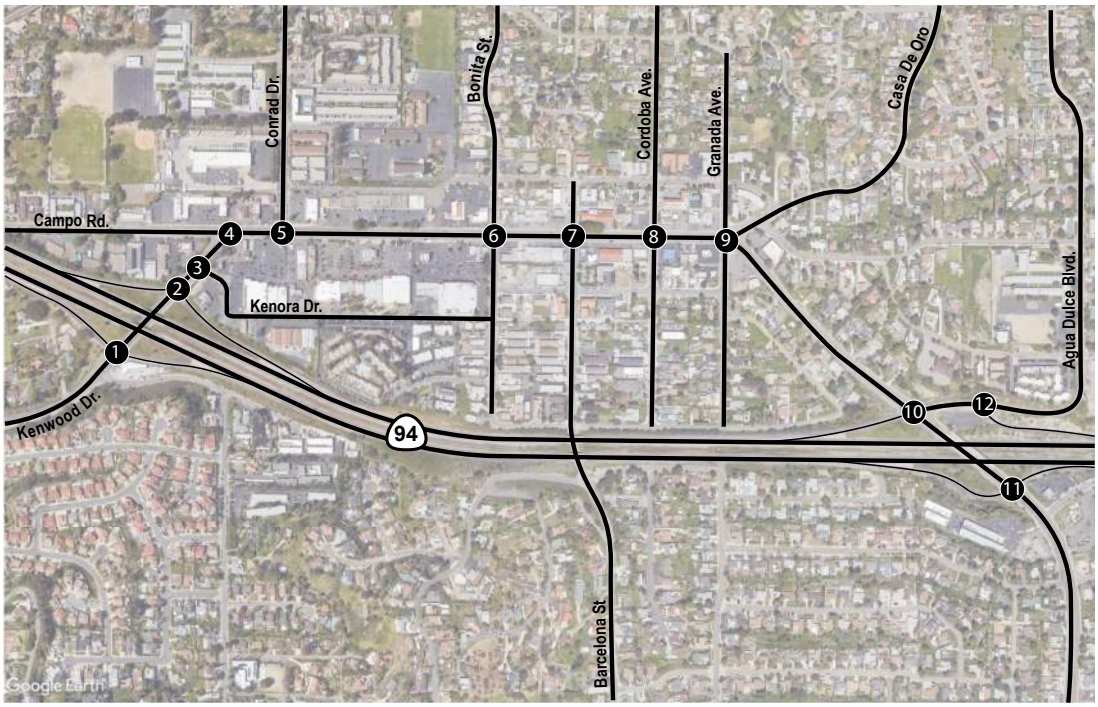
= Signal Control Intersection

= Stop Control Intersection

Y = Yield Control Movement

TWLTL = Two-Way-Left-Turn-Lane

D = Defacto Turn-Lane



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Study Intersection Lane Geometry

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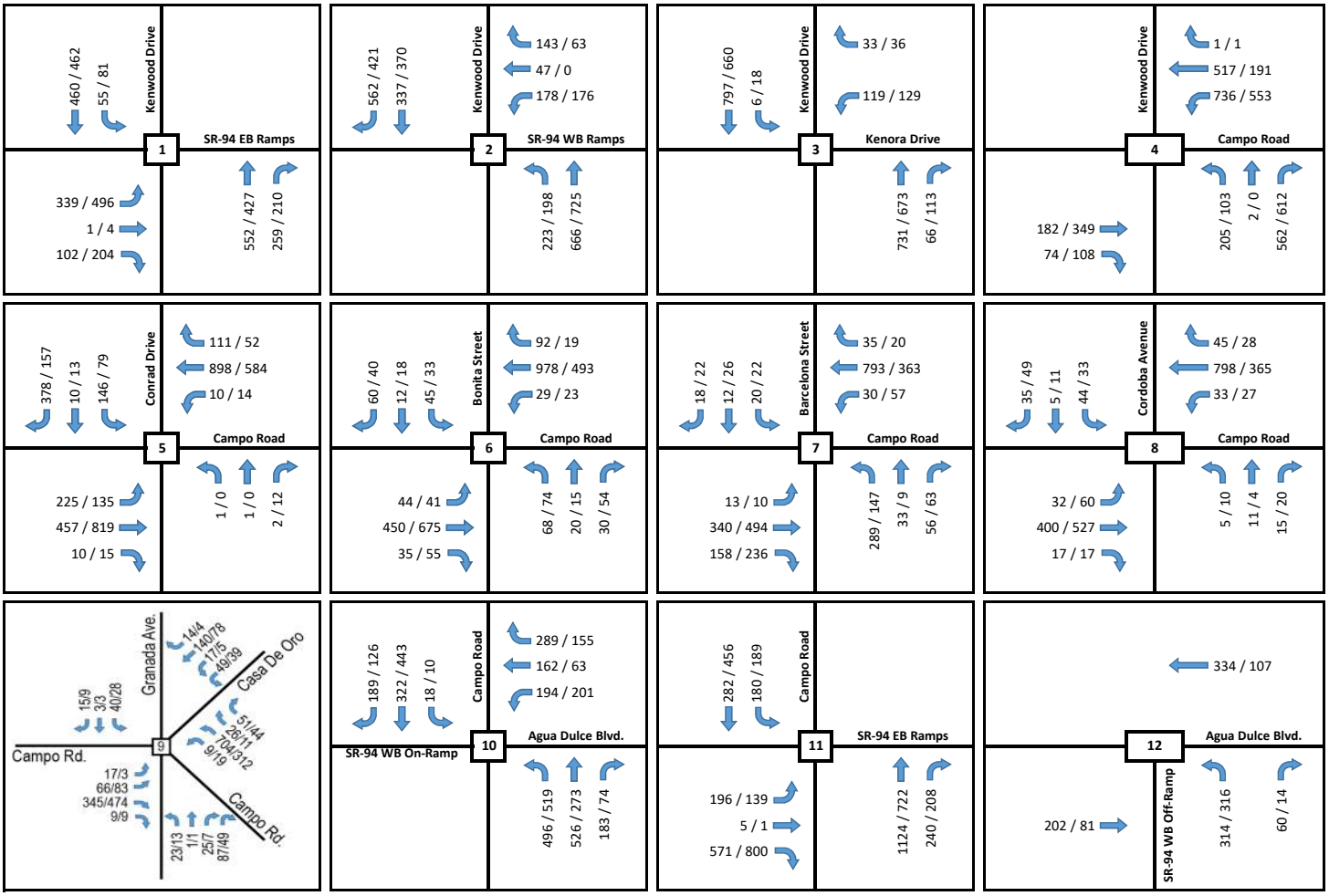
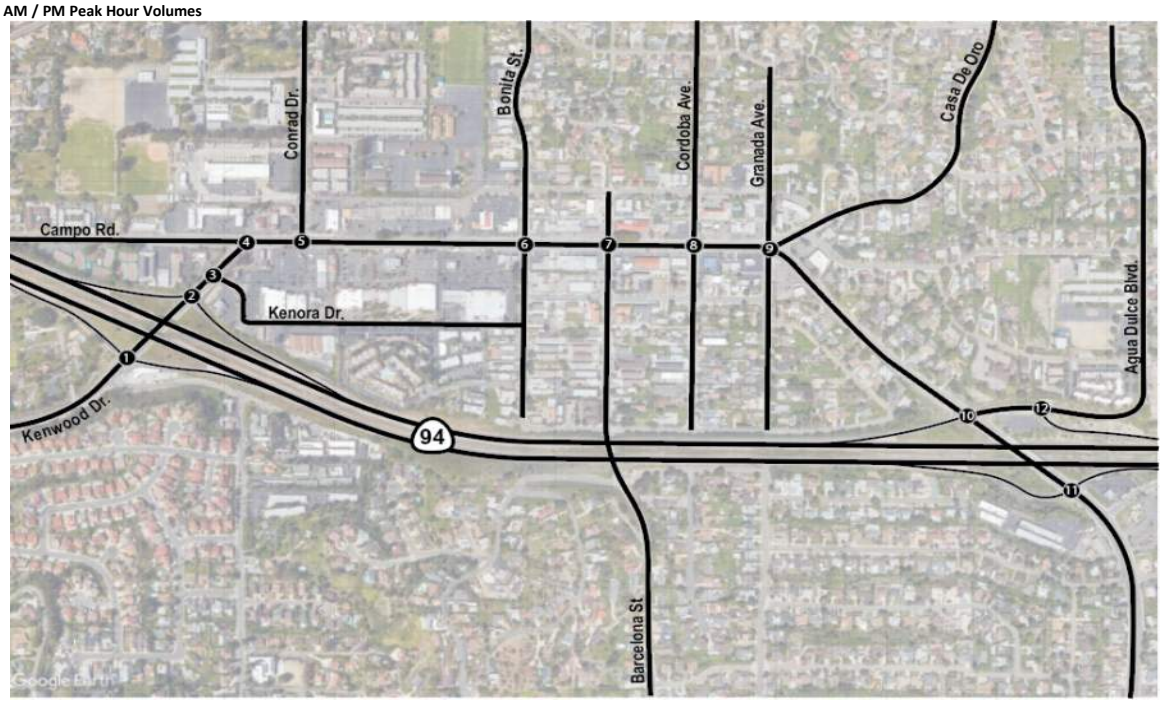
Exhibit 4



Notes: **XX / XX = AM / PM Peak Hour Volumes**



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Existing AM/PM Peak Hour Volumes

Exhibit 5

2.3 EXISTING PEDESTRIAN FACILITIES

Existing peak hour pedestrian activity was recorded on Tuesday, November 12, 2019. Based on the existing counts, pedestrian activity on Campo Road during the AM peak hour peaks at the Conrad Drive westside crosswalk with 84 pedestrians crossing Campo Road. During the PM Peak hour, pedestrian activity peaks at the Kenwood Drive/ SR-94 Eastbound Ramp intersection where 20 pedestrians cross the on-ramp.

Exhibits 6a-6f illustrate the existing activity as well as the current pedestrian facilities within the study area. The types of facilities shown include the following:

- Sidewalks
- Ped Ramps
- Marked Crosswalks
- Pedestrian Push Buttons (at signalized intersections)
- Pedestrian Signal Heads (at signalized intersections)

Within the study area, there are approximately a combined 70 driveways on the north and south sides of Campo Road within a 2/3 mile stretch between Rogers Road and Granada Avenue. On average, this is approximately one driveway every 50 feet. The high frequency of driveways along the corridor creates numerous conflict points between motorists, pedestrians, and bicyclists and the excessive curb cuts prevent landscaping, lighting, and parking. All driveways are paved concrete and appear to meet County standards. **Exhibit 7** shows all of the driveway locations on Campo Road.

In addition to the conflict points caused by the driveways, the existing retaining walls within the shopping centers prevent pedestrian and vehicular connectivity between adjacent properties. These barriers impede access, complicate circulation, and generate additional traffic from the increased turn movements to and from Campo Road.

2.3.1 Sidewalks

Campo Road – Sidewalks are provided on both sides of Campo Road between Kenwood Drive and Casa de Oro Boulevard. On the westerly side of the study area, sidewalks terminate approximately 400' feet west of Kenwood Drive on the north side of Campo Road and approximately 525' west of Kenwood Drive on the south side of Campo Road. To the east, there is a gap in the sidewalk for approximately 0.2 miles between Casa de Oro Boulevard and Agua Dulce Boulevard on the northeast side of Campo Road. On the southwest side of Campo Road, there is a gap in the sidewalk between the SR-94 ramps across the bridge.

Sidewalks are generally 6 feet wide along Campo Road, however they are reduced to as little as 3 feet where transit stops have benches

Kenwood Drive – Within the study area, sidewalks are provided on the southeast side of Kenwood Drive with the exception of approximately 185' between Kenora Drive and Campo Road. There are no sidewalks on the northwest side of Kenwood Drive.

Conrad Drive – Within the study area, sidewalks are provided on both sides of the street between Campo Road and the north boundary of Spring Valley Middle School. There are no sidewalks on Conrad Drive north of the school.

Bonita Street – Within the study area, sidewalks are provided on both sides of the street between Buena Vista Drive and San Juan Street.

Barcelona Street – Within the study area, sidewalks are provided on both sides of the street between Buena Vista Drive and San Juan Street. There are no sidewalks on Barcelona Street south of Buena Vista Drive.

Cordoba Avenue – Within the study area, sidewalks are provided on both sides of the street between Buena Vista Drive and San Juan Street.

Granada Avenue – Within the study area, sidewalks are provided on both sides of the street between Buena Vista Drive and Dolores Street. There are no sidewalks on Granada Avenue on either side of the street between Dolores Street and Buena Vista Drive.

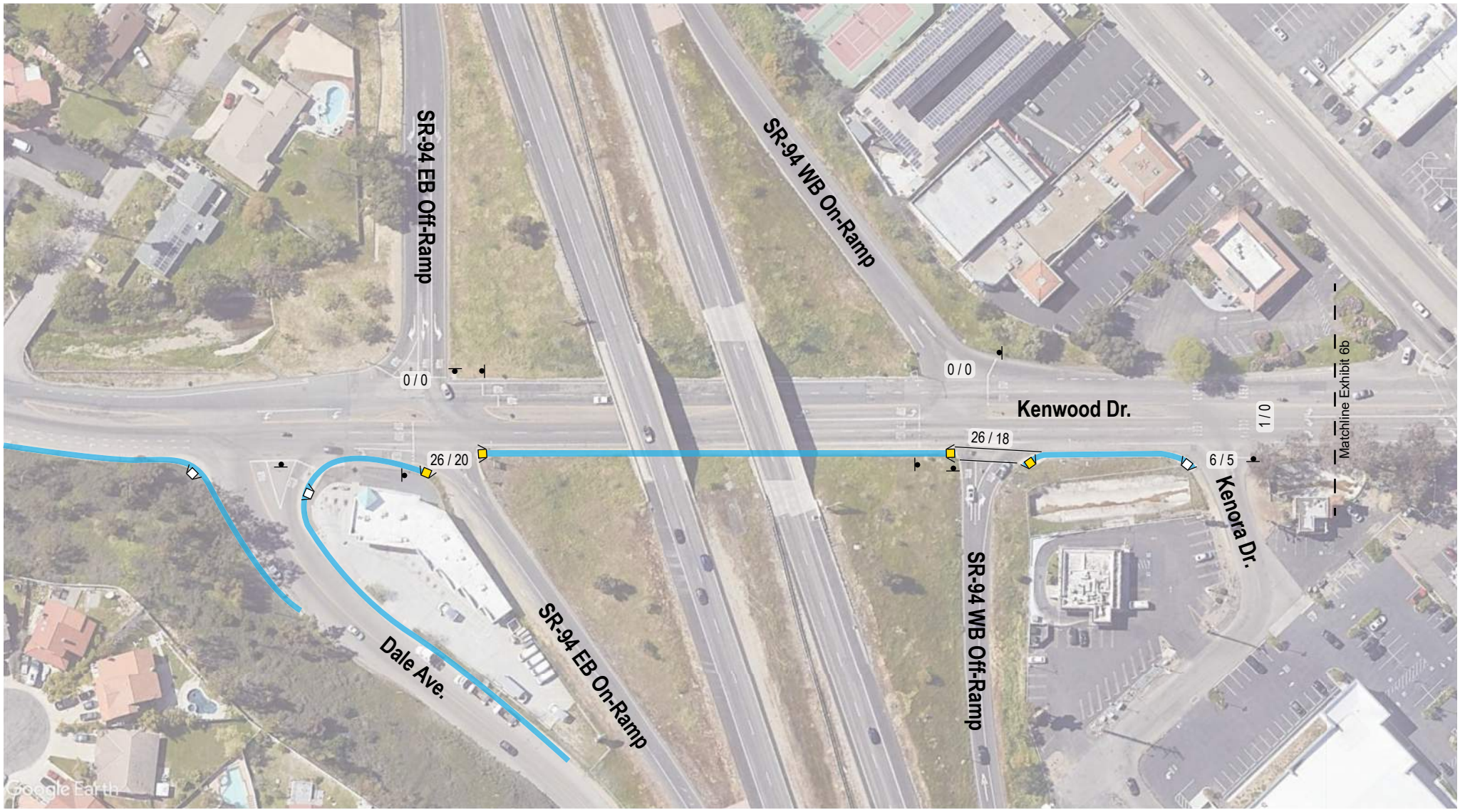
Casa de Oro Boulevard – Within the study area, sidewalks are provided on both sides of the street between Campo Road and San Juan Street. East of San Juan Street sidewalks are intermittent within the residential neighborhoods with many gaps.

2.3.2 Crosswalks

Standard marked crosswalks are provided at all signalized intersections with the exception of the intersection of Campo Road and Barcelona Street. At the intersections of Campo Road at Conrad Drive and Bonita Street, marked crosswalks are only provided across Campo Road and do not exist across the minor streets. Throughout the corridor, many of the crosswalk pavement markings are beginning to fade and need to be restriped.

Near Spring Valley Middle School, there are two mid-block, controlled crossings with flashing beacon warnings on Conrad Drive at the north and south limits of the school. These locations are striped as continental crosswalks with pedestrian push buttons that control the overhead flashing beacons as well as ADA compliant ramps with truncated domes.

At the easterly end of the study area, there are continental crosswalks across Casa de Oro at San Juan Street as well as across Ramona Drive at Casa de Oro. These locations, however, do not have any ramps and pedestrians must step off of the curb into the street.



Legend

- = Existing Sidewalk
- = Ped. Ramp
- = Ped. Ramp with Truncated Domes
- = Marked Crosswalk
- = Signal Controlled Intersection
- = Stop Controlled Intersection
- = Ped.Push Button (non-ADA)
- = Ped. Push Button (ADA)
- = Ped. Signal Head
- CT = Ped. Signal Head with Countdown
- #/# = AM / PM Peak Hour Ped. Volumes
- = Bus Stop

Not to Scale

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Existing Pedestrian Facilities & AM/PM Peak Hour Pedestrian Volumes

Exhibit 6a

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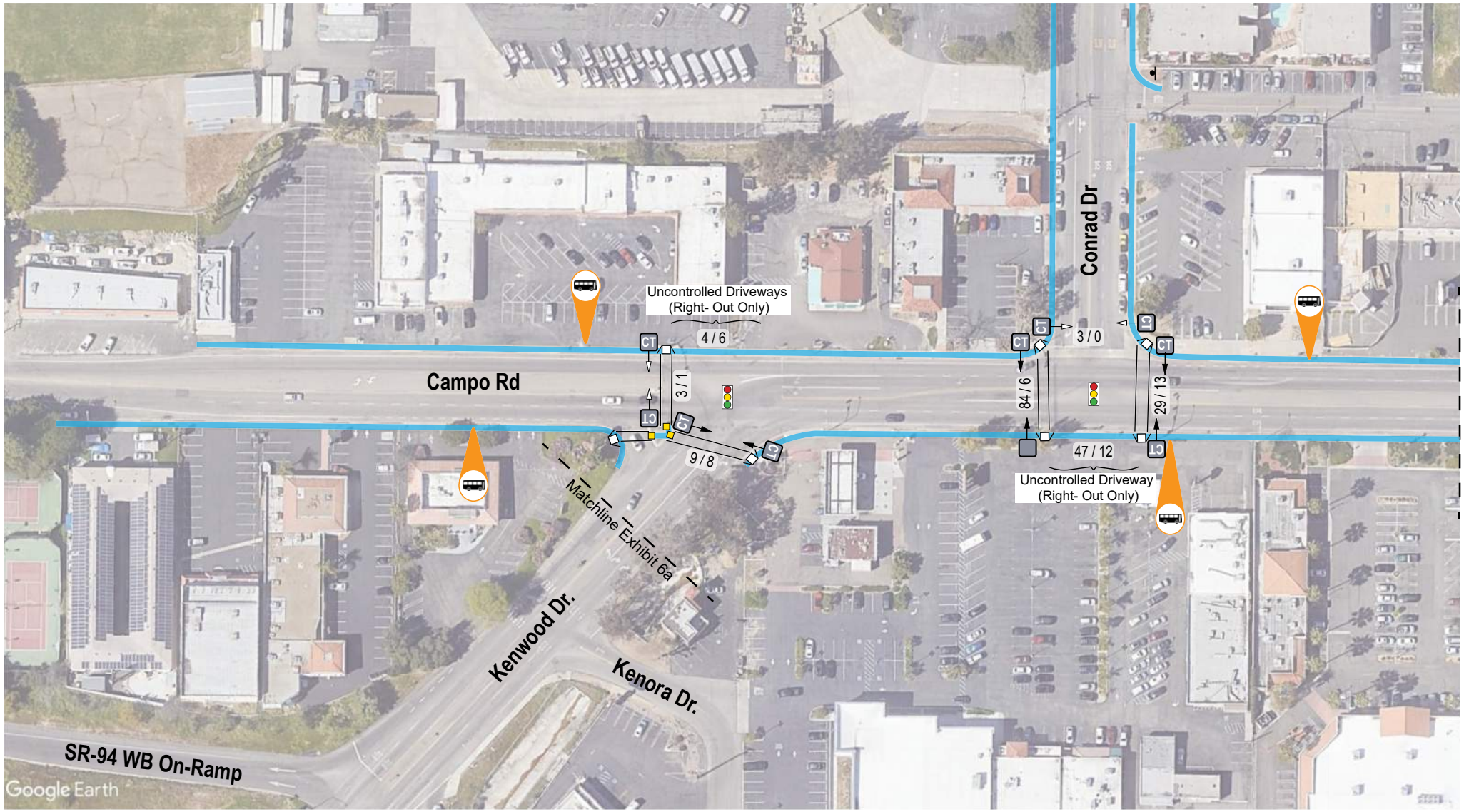

Legend

- = Existing Sidewalk
- = Ped. Ramp
- = Ped. Ramp with Truncated Domes
- = Marked Crosswalk
- = Signal Controlled Intersection
- = Stop Controlled Intersection
- = Ped.Push Button (non-ADA)
- = Ped. Push Button (ADA)
- = Ped. Signal Head
- CT = Ped. Signal Head with Countdown
- #/# = AM / PM Peak Hour Ped. Volumes
- = Bus Stop

Not to Scale

Existing Pedestrian Facilities & AM/PM Peak Hour Pedestrian Volumes

Exhibit 6b

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January 2020
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Legend

- = Existing Sidewalk
- = Ped. Ramp
- = Ped. Ramp with Truncated Domes
- = Marked Crosswalk
- = Signal Controlled Intersection
- = Stop Controlled Intersection
- = Ped.Push Button (non-ADA)
- = Ped. Push Button (ADA)
- = Ped. Signal Head
- CT = Ped. Signal Head with Countdown
- #/# = AM / PM Peak Hour Ped. Volumes
- = Bus Stop

Not to Scale

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Existing Pedestrian Facilities & AM/PM Peak Hour Pedestrian Volumes

Exhibit 6c

January 2020
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Legend

- = Existing Sidewalk
- = Ped. Ramp
- = Ped. Ramp with Truncated Domes
- = Marked Crosswalk
- = Signal Controlled Intersection
- = Stop Controlled Intersection
- = Ped.Push Button (non-ADA)
- = Ped. Push Button (ADA)
- = Ped. Signal Head
- CT = Ped. Signal Head with Countdown
- #/# = AM / PM Peak Hour Ped. Volumes
- = Bus Stop

Not to Scale

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Existing Pedestrian Facilities & AM/PM Peak Hour Pedestrian Volumes

Exhibit 6d

January 2020
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Legend

- = Existing Sidewalk
- = Ped. Ramp
- = Ped. Ramp with Truncated Domes
- = Marked Crosswalk
- = Signal Controlled Intersection
- = Stop Controlled Intersection
- = Ped.Push Button (non-ADA)
- = Ped. Push Button (ADA)
- = Ped. Signal Head
- CT = Ped. Signal Head with Countdown
- #/# = AM / PM Peak Hour Ped. Volumes
- = Bus Stop

Not to Scale

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Existing Pedestrian Facilities & AM/PM Peak Hour Pedestrian Volumes

Exhibit 6e

January 2020
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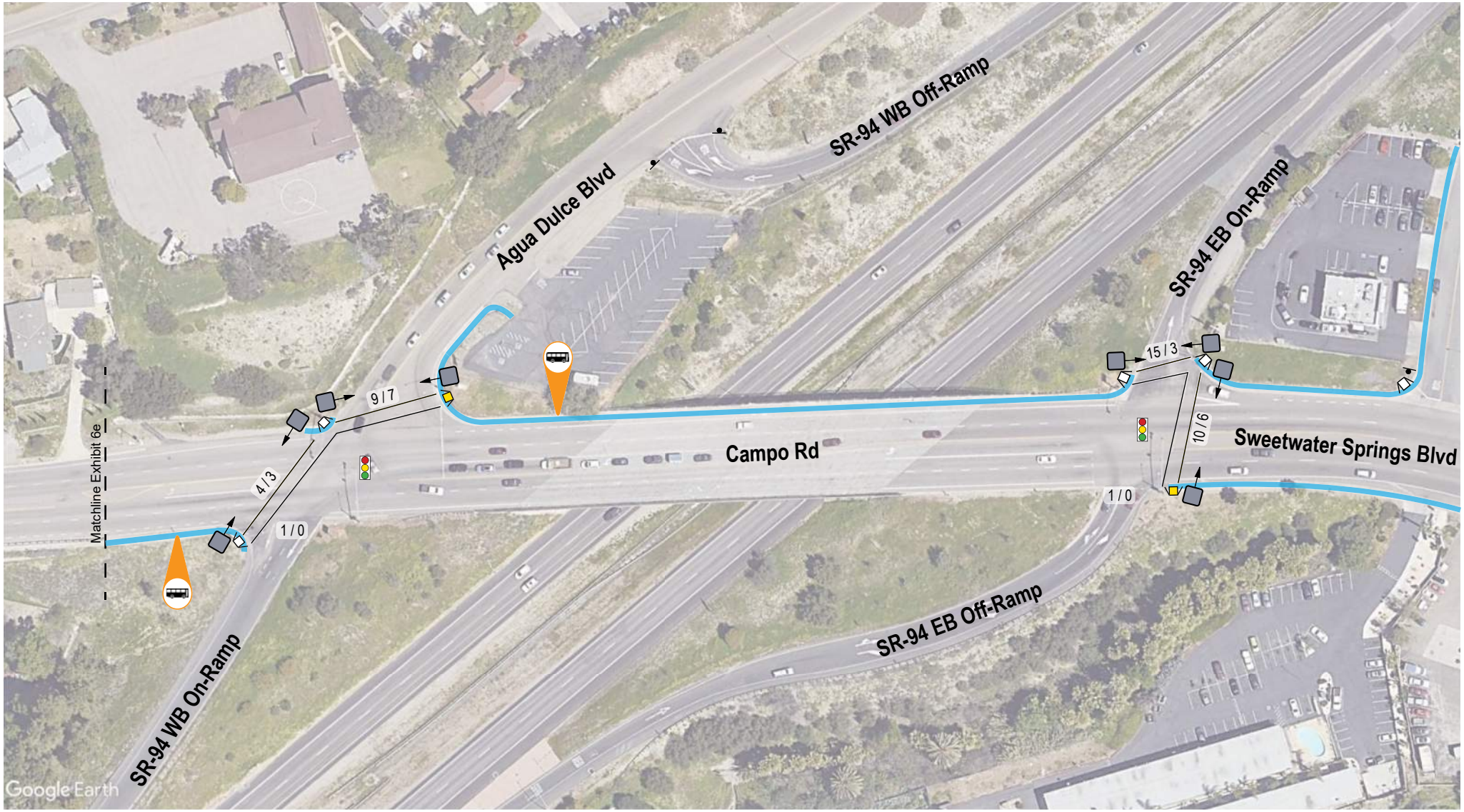

Legend

- = Existing Sidewalk
- = Ped. Ramp
- = Ped. Ramp with Truncated Domes
- = Marked Crosswalk
- = Signal Controlled Intersection
- = Stop Controlled Intersection
- = Ped.Push Button (non-ADA)
- = Ped. Push Button (ADA)
- = Ped. Signal Head
- CT = Ped. Signal Head with Countdown
- #/# = AM / PM Peak Hour Ped. Volumes
- = Bus Stop

Not to Scale

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Existing Pedestrian Facilities & AM/PM Peak Hour Pedestrian Volumes

Exhibit 6f

January 2020
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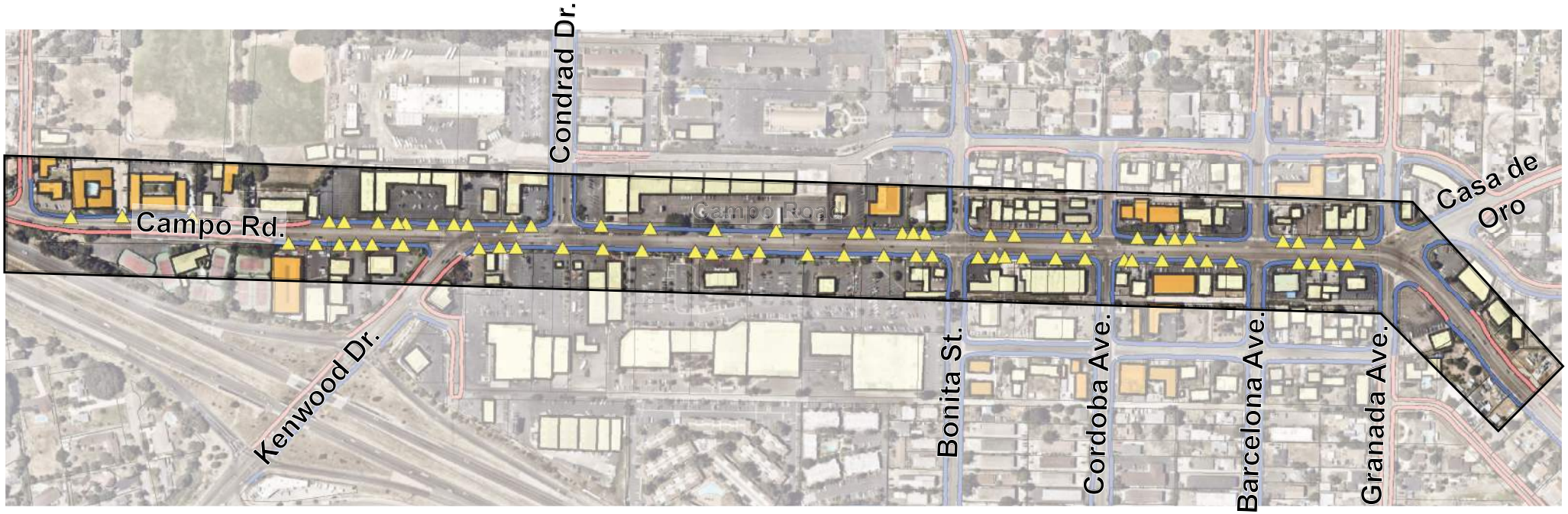

Legend

= Existing Sidewalk

= No Sidewalk

= Existing Driveways

Not to Scale

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Driveway Locations on Campo Road

Exhibit 7

January 2020

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2.3.3 ADA Facilities

The majority of the signalized intersections within the study area have controlled crossings as discussed above; however, these crossings are only partially ADA compliant. It should be noted that none of these crossings have audible cues or any other non-visual indicators.

Exhibits 6a-6f show the existing pedestrian facilities and include the following factors that have been considered in evaluating whether a crossing is considered ADA compliant:

TABLE 5 - ADA FACTORS

ADA Facility	Evaluation Factor
Pedestrian Ramp	Presence of Truncated Domes
Pedestrian Push Button	2" Diameter
Pedestrian Signal Head	Presence of Countdown Timer

Along Campo Road, the following intersections have truncated domes:

- Campo Road / Kenwood Drive – Pedestrian Refuge (southwest corner) only
- Campo Road / Barcelona Street – Northwest and Southwest corners only
- Campo Road / Granada Avenue / Casa de Oro Boulevard – Southwest and Southeast corners only

It should be noted that the northeast and southeast corners of intersection of Campo Road and Barcelona Street do not have any pedestrian ramps for the north/south crossing of Campo Road. There are pushbuttons and pedestrian signal heads, but no ramps.

The presence of ADA compliant pedestrian push buttons that are considered "accessible" (2 inches in diameter) are intermittent within the study area. Of the 36 pedestrian push buttons on Campo Road between Kenwood Drive and Granada Avenue / Casa de Oro Boulevard, only 13 buttons are "accessible".

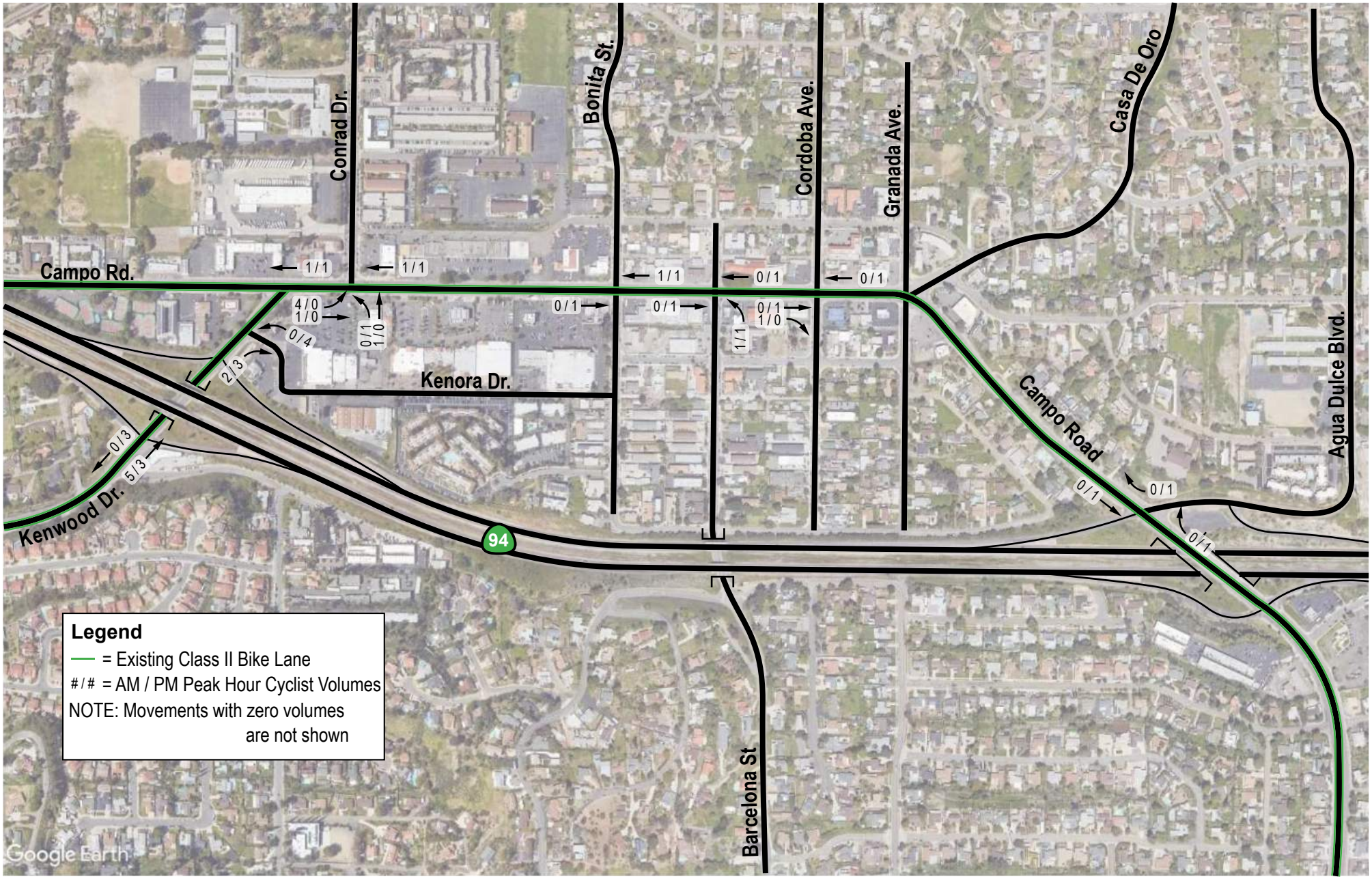
The presence of countdown timers on pedestrian signal heads are prevalent within the study area. Of the 36 pedestrian signal heads on Campo Road between Kenwood Drive and Granada Avenue / Casa de Oro Boulevard, 27 signal heads have a countdown timer. The only location without countdown timers in the study area is at Campo Road and Barcelona Street.

2.4 EXISTING BICYCLE FACILITIES

Existing peak hour bicycle activity was recorded on Tuesday, November 12, 2019. Based on existing counts during the AM peak hour, bicycle activity peaks near the southern extents of study area on Kenwood Drive (5 bicycles northbound). In the PM Peak hour, bicycle activity peaks near Kenora Drive (4 bicycles on westbound Kenora).

Within the study area, Class II bike lanes are provided on Kenwood Drive and on Campo Road on both sides of the street. These bike lanes are consistently 5 feet in width with the exception of a portion of Kenwood Drive between Kenora Drive and Campo Road where the bike lane is reduced to 4 feet on the east side. There are no buffers separating bicyclists from vehicles on Kenwood Drive or Campo Road.

Exhibit 8 shows the existing bicycle facilities as well as the peak hour bicyclist volumes.



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Existing Bicycle Facilities & Cyclist Peak Hour Volumes

January 2020
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Exhibit 8

2.5 EXISTING TRANSIT FACILITIES

The Metropolitan Transit System (MTS) operates the local bus service within the Valle de Oro Community. MTS Route 855 travels along Campo Road as shown in **Exhibit 9** connecting La Mesa, Casa de Oro, Spring Valley, and Rancho San Diego. Destinations on Route 855 include Campo Road, Casa de Oro Plaza, Monte Vista High School, and Sweetwater Springs Boulevard. The bus route travels between the Spring Street Trolley Station (with connections to Route 851 and the Orange Line Trolley), and Rancho San Diego (with connections to Route 856 at Jamacha Boulevard and Lamplighter Village Drive).

Full service is provided Monday through Friday with reduced service on weekends and holidays. According to the MTS website, the average headways on a weekday is approximately 30 minutes between 6:04 AM and 10:51 PM in the eastbound direction. In the westbound direction, the bus operates between 5:02 AM and 9:19 PM with approximately 30 minute headways.

Within the study area, there are 14 bus stops along Campo Road (7 eastbound & 7 westbound). None of the bus stop locations have shelters or maps/wayfinding information. The following amenities are provided:

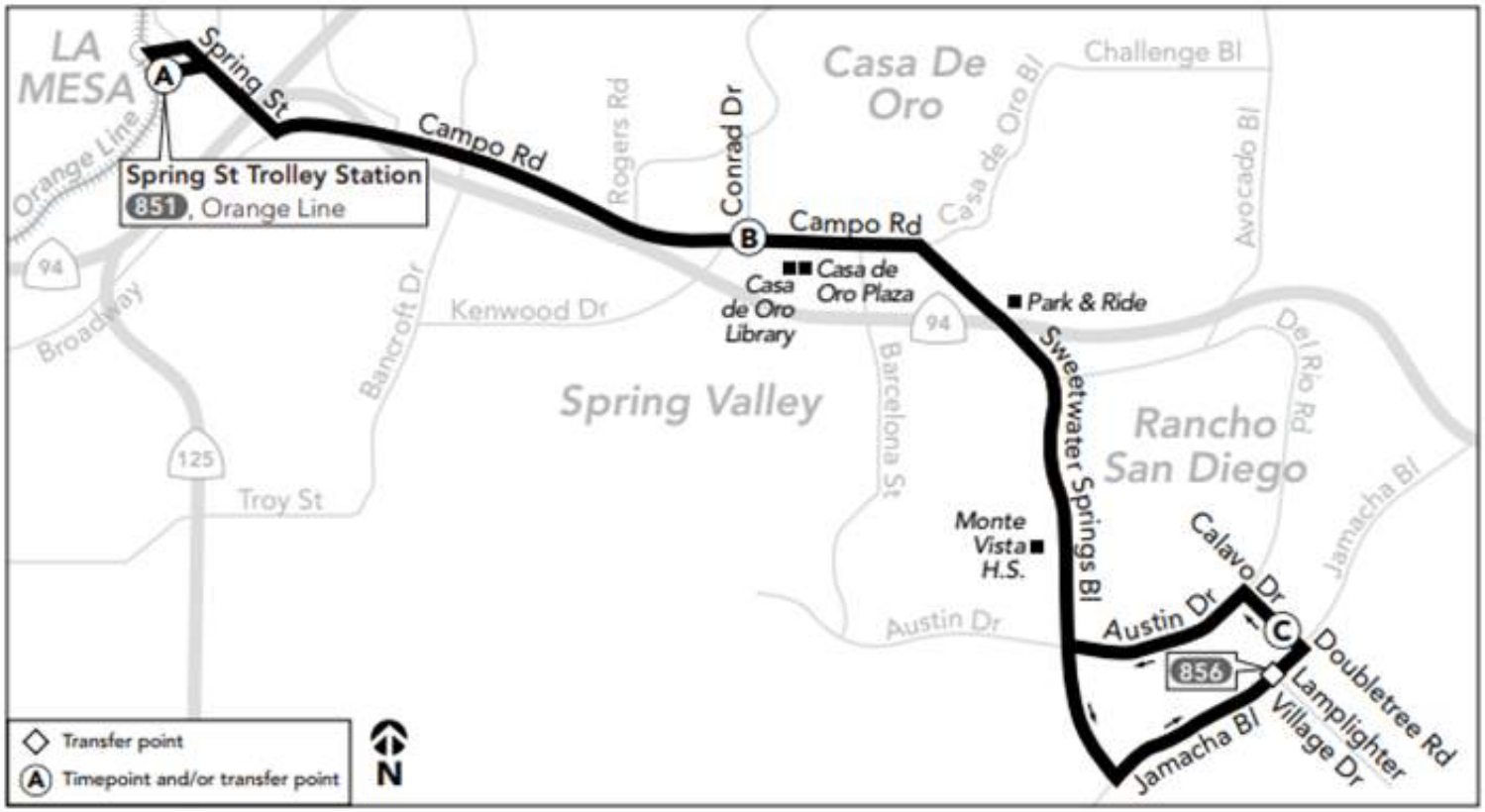
- Trash Receptacle (7 of 14 locations)
- Bench Seating (11 of 14 locations)
- Lighting (6 of 14 locations)

None of the bus stop locations have dedicated lighting, however 6 of the 14 locations have adjacent street lights or traffic signal poles with a luminaire mast arm.

The available amenities at each bus stop are summarized in **Table 6** and **Exhibit 10**.

TABLE 6 - EXISTING BUS STOP AMENITIES ALONG CAMPO ROAD

ID	Bus Stop	Direction	Available Amenities			
			Sign	Trash Recepticle	Bench	Lighting
1	Kenwood Drive	EB	✓	✓		
2	Kenwood Drive	WB	✓	✓		
3	Conrad Drive	EB	✓		✓	✓
4	Conrad Drive	WB	✓		✓	
5	Bonita Street	EB	✓		✓	✓
6	Bonita Street	WB	✓	✓	✓	✓
7	Barcelona Street	EB	✓			✓
8	Barcelona Street	WB	✓		✓	
9	Granada Avenue	EB	✓	✓	✓	✓
10	Granada Avenue	WB	✓	✓	✓	
11	Agua Dulce Boulevard	SB	✓		✓	
12	Agua Dulce Boulevard	NB	✓		✓	✓
13	Sweetwater Springs @ Campo Road	SB	✓	✓	✓	
14	Sweetwater Springs @ Del Rio	NB	✓	✓	✓	



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MTS Route 855 - Spring St. Trolley to Rancho San Diego

January 2020
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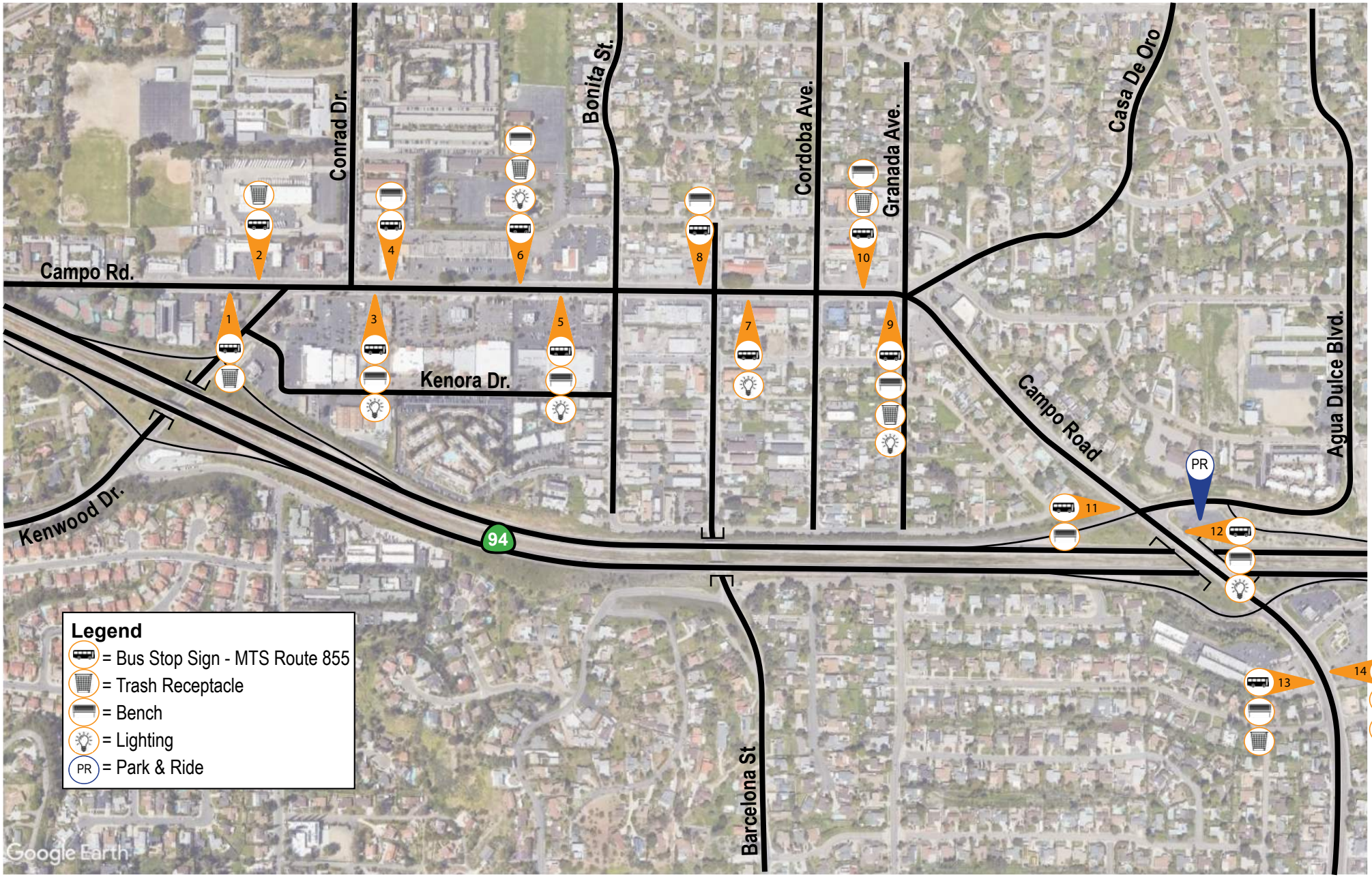
Exhibit 9



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Existing Bus Stops & Amenities

January 2020
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Exhibit 10

3 EXISTING PARKING ASSESSMENT

3.1 DATA COLLECTION

A detailed parking utilization survey was conducted in and around the Casa de Oro community on Friday, December 13, 2019. The counts were conducted in December to document the peak season parking demand. The parking survey was conducted for 7 hours from 10:00 AM to 5:00 PM with utilization data collected every hour.

Exhibits 11a and **11b** show the parking survey zones included in the survey. For the purposes of this study, the study area was broken up into a total of 72 parking survey zones. The general extents of the survey included 60 off-street parking lots on non-residential parcels along Campo Road between Rodgers Road and Granada Avenue / Casa de Oro Boulevard. In addition, 12 road segments with on-street parking block faces were included along both sides of the following minor streets:

- Conrad Avenue (Campo Road to San Juan Street)
- Bonita Street (Dolores Street to San Juan Street)
- Barcelona Street (Dolores Street to San Juan Street)
- Cordoba Avenue (Dolores Street to San Juan Street)
- Granada Avenue (Dolores Street to San Juan Street)

Appendix C contains detailed parking inventory and survey data.

3.2 PARKING SURVEY

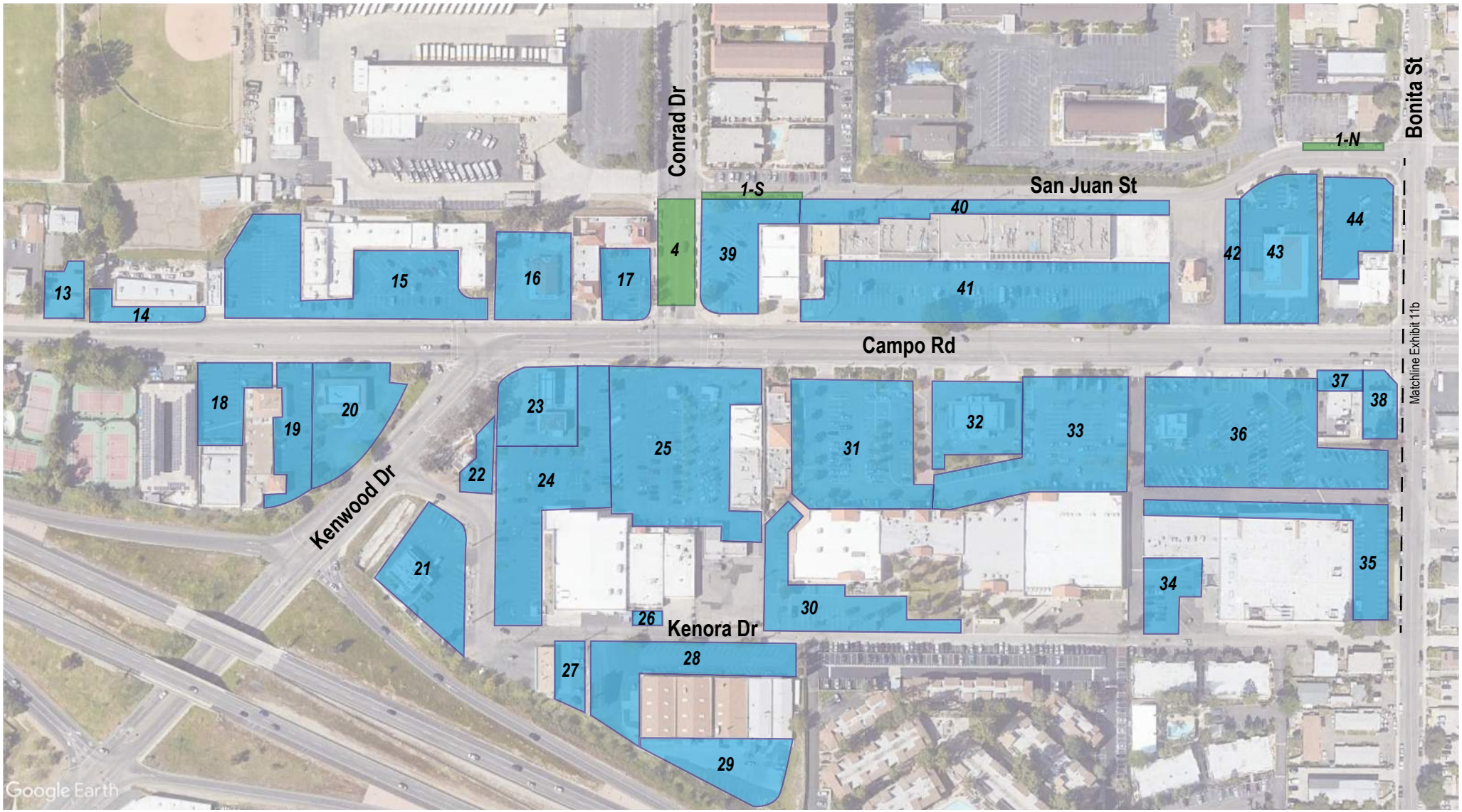
3.2.1 Parking Inventory

The survey included an inventory of the existing non-residential parking facilities within the study area. The parking inventory was broken down into different types of parking including regular parking spaces, ADA spaces (including van), and restricted spaces (i.e. temporary parking, customer only, etc.). **Table 7** summarizes the parking inventory. As shown, The parking survey determined there is a total parking supply of 175 on-street public parking spaces and 1,794 off-street parking spaces within the study area.

Occupied spaces were recorded each hour within each off-street parking lot as well as the identified on-street block faces.

TABLE 7 – EXISTING PARKING INVENTORY

Parking Type		Total Inventory
On-Street		175
Off-Street	Regular	1,607
	ADA	62
	ADA - Van	25
	Customer Only	16
	Time Restricted	55
	Other (1)	29
Sub-Total Off-Street		1,794
Total Parking Supply		1,969



Legend

= On-Street Parking

= Off-Street Parking

= Parking Zone ID

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Parking Survey Zones
Area 1

Exhibit 11a

January 2020

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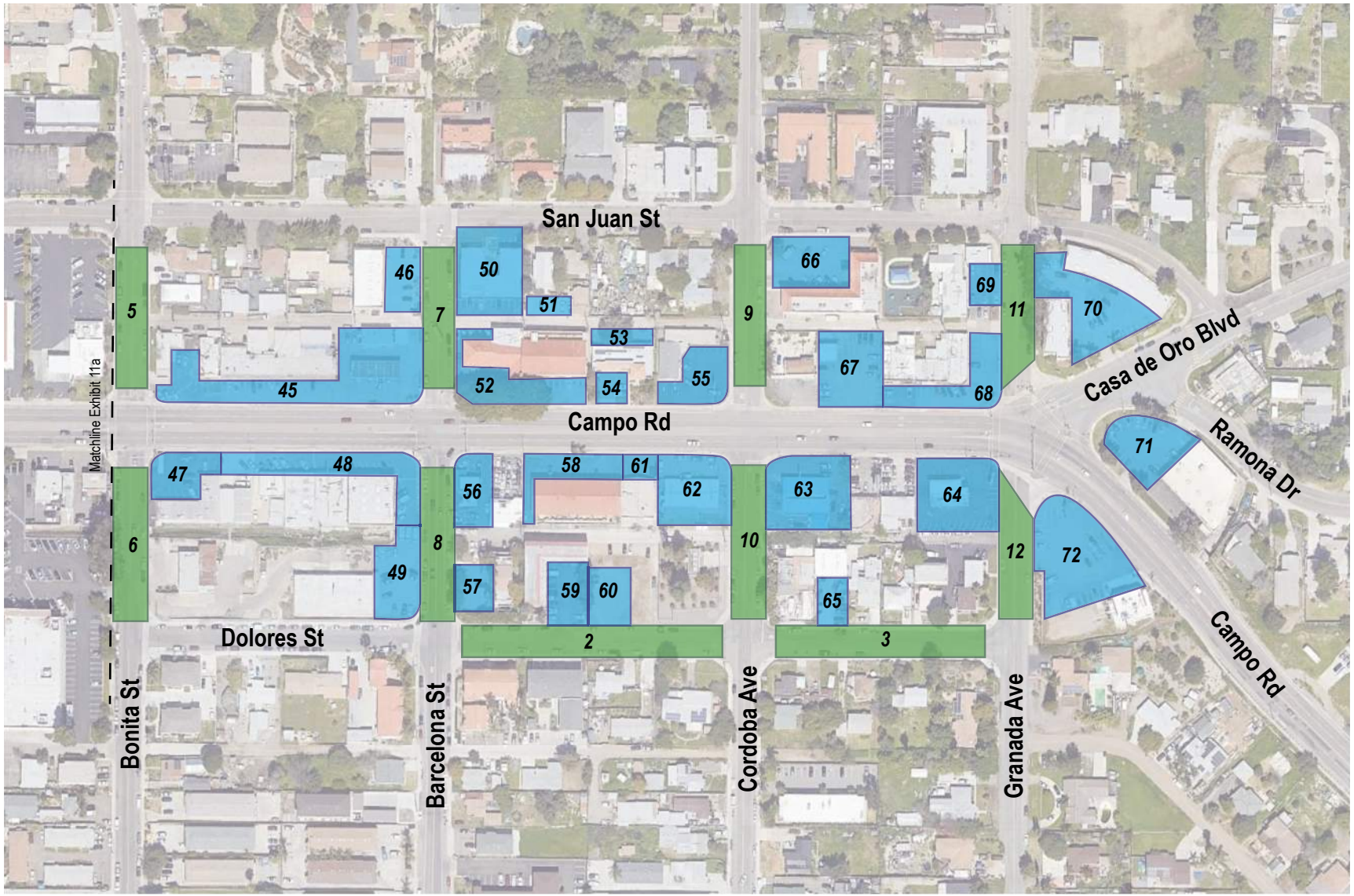

Legend

= On-Street Parking

= Off-Street Parking

= Parking Zone ID

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Parking Survey Zones
Area 2

Exhibit 11b

January 2020

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3.2.2 Parking Utilization

As part of the survey, occupied spaces were recorded every hour for 7 hours from 10:00 to 5:00 PM for all 72 of the parking survey zones. This data was used to document the parking utilization (percent of available spaces occupied) for each parking survey zone.

Detailed Parking Utilization data is contained in **Appendix F.**

Based on the parking survey, the lowest combined parking demand for the study area is during the 10:00 AM hour when 35.2% of the total available spaces were utilized. The peak parking demand for the study area occurred at 2:00 PM when 102 on-street parking spaces and 798 off-street parking spaces were occupied for a total of 900 occupied spaces. This represents a combined parking utilization of 45.7%. This shows that during the peak period, less than half of the available parking spaces are occupied within the study area. The survey found that on-street parking utilization (58.3%) was higher than off-street parking utilization (44.5%)

Exhibit 12 and **Table 8** summarizes the peak parking utilization at 2:00 PM on Friday December 13, 2019.

TABLE 8 – PEAK PARKING UTILIZATION

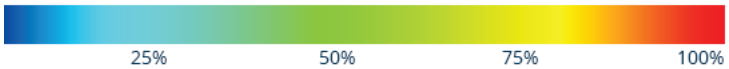
Parking	Inventory	Peak Occupancy (1)	Peak Utilization
On-Street	175	102	58.3%
Off-Street	1794	798	44.5%
Total	1,969	900	45.7%

(1) Peak Parking Demand based on parking survey data from Friday, December 13 at 2:00 PM

It should be noted that the land uses which experience the highest level of occupancy are automotive repair related. That is, a high number of vehicles are temporarily stored on-site while being worked on or awaiting pick-up. In many of these areas, the utilization exceeds 100% because the vehicles are being parked in unmarked spaces.

Additionally, other parking survey zones had vehicles parked in unmarked spaces, including two car-washes. These unmarked spaces were not included in the inventory, but they were counted towards the utilization. Even so, only 7 of the 72 survey zones experienced parking utilization rate greater than 85%.

Source: National Data & Surveying Services



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Peak Parking Utilization
Friday December 13, 2019 - 2:00 PM to 3:00 PM

Exhibit 12

3.3 EXISTING PARKING RATIOS

The Casa de Oro community along the Campo Road corridor is primarily a commercial area with a mix of retail, fast-food, restaurants, and offices. **Table 9** shows the County of San Diego required parking rates per Zoning Ordinance Part 6.

As shown, the parking rates range from 1.0 spaces per 1,000 square feet (KSF) for light manufacturing to 12.0 spaces per KSF for a fast-food restaurant without a drive-thru and averages at 5.2 spaces per KSF.

TABLE 9 – EXISTING COUNTY PARKING REQUIREMENTS

Land Use		Parking Rate
Commercial Office		4.0 / KSF
Bank		4.0 / KSF
Restaurant	Up to 3 KSF	6.0 / KSF
	More than 3 KSF	10.0 / KSF
Fast-Food Restaurant	With Drive-Thru	9.5 / KSF
	Without Drive-Thru	12.0 / KSF
Retail		4.5 / KSF
Liquor Store		3.3 / KSF
Drugstore		3.5 / KSF
Library		3.0 / KSF
General Manufacturing		1.5 / KSF
Light Manufacturing		1.0 / KSF

Source:
San Diego County Zoning Ordinance (Part 6: General Provisions, Section 6762-6764)
KSF = 1,000 square feet

Based on available land parcel information within the study area, existing parking supply rates were calculated for non-residential properties included in the parking inventory. It should be noted that this parcel information did not include specific land use type categories. **Table 10** summarizes the existing parking supply rate per the parking inventory. **Table 10** also compares these supply rates to the actual parking demand that was recorded during the parking utilization survey for the properties included in the analysis.

As shown, the existing parking supply provided by individual parcels ranges from 0.9 spaces per KSF to 10.3 spaces per KSF. When the entire study area is considered as a whole, parking is provided at a rate of 3.3 spaces per KSF (1,786 spaces / 548.43 KSF = 3.3 spaces per KSF). This range of parking supply rates for the study area parcels and the average supply rate is consistent with the County code parking requirements.

The actually parking demand rate according to the parking utilization survey ranges from 0.2 spaces per KSF to 6.7 spaces per KSF. When the entire study area is considered as a whole, parking is utilized at a demand rate of 1.4 spaces per KSF (793 spaces / 548.43 KSF = 1.4 spaces per KSF). Therefore, the actual parking demand is less than half of the parking supply within the study area.

TABLE 10 – EXISTING PARKING SUPPLY & ACTUAL PARKING DEMAND RATES

Parking Zone ID	Floor Area (SF)	Parking Inventory	Existing Parking Supply Rate [1]	Peak Parking Demand [2]	Actual Parking Demand Rate [3]
13	7,730	11	1.4	4	0.5
14	5,780	11	1.9	4	0.7
15	25,130	109	4.3	27	1.1
16	3,440	25	7.3	4	1.2
17	10,980	25	2.3	15	1.4
18	7,360	29	3.9	11	1.5
19	11,180	36	3.2	19	1.7
20	5,230	16	3.1	7	1.3
21	4,150	35	8.4	7	1.7
22	4,970	11	2.2	1	0.2
23	3,290	3	0.9	1	0.3
24-26	37,090	201	5.4	65	1.8
28-29	27,200	67	2.5	38	1.4
30-33	59,630	308	5.2	135	2.3
34-36	69,010	196	2.8	112	1.6
37	2,920	5	1.7	2	0.7
38	1,040	2	1.9	7	6.7
39	8,790	37	4.2	14	1.6
40-41	38,960	220	5.6	79	2.0
42	2,420	8	3.3	5	2.1
43	17,250	32	1.9	7	0.4
44	5,730	25	4.4	7	1.2
45	18,120	28	1.5	22	1.2
46	5,150	9	1.7	4	0.8
47	3,900	14	3.6	7	1.8
48	15,240	26	1.7	20	1.3
49	13,310	11	0.8	16	1.2
50	6,140	14	2.3	5	0.8
51	2,150	4	1.9	2	0.9
52	20,740	20	1.0	13	0.6
53-54	4,190	17	4.1	7	1.7
55	3,380	15	4.4	5	1.5
56	1,640	9	5.5	9	5.5
58	17,640	18	1.0	10	0.6
59	10,770	18	1.7	17	1.6
61	3,120	5	1.6	2	0.6
62*	4,100	1	0.2	5	1.2
64	2,530	26	10.3	7	2.8
65	2,500	6	2.4	3	1.2
66	18,550	18	1.0	13	0.7
67-68	10,940	31	2.8	3	0.3
69	6,360	9	1.4	7	1.1
70	10,710	26	2.4	23	2.1
71	8,870	22	2.5	15	1.7
72	3,200	28	8.8	12	3.8
Totals	548,430	1,786	3.3	793	1.4

[1] Existing parking rate calculated using total parking inventory per 1,000 SF of floor area (spaces/1,000 SF)
[2] Peak Parking Demand based on parking survey data from Friday, December 13 at 2:00 PM
[3] Actual parking rate calculated using peak parking utilization per 1,000 SF of floor area (spaces/1,000 SF)
* Not included in total calculations

4 HORIZON YEAR 2035 WITH PROJECT TRAFFIC CONDITIONS

4.1 CASA DE ORO REVITLIZATION

The Campo Road Revitalization Specific Plan covers a 63-acre area (42 acres excluding roads and rights-of-way) centered on Campo Road between Rogers Road and Granada Avenue and serves as the commercial and civic center of the Casa de Oro community. The Specific Plan area primarily encompasses the commercial area extending one block north and south of Campo Road. The Specific Plan intends to transform Campo Road from "drive-through" to a walkable "main street" that is pedestrian-friendly, attractive, and efficient for all modes and becomes the center of the Casa de Oro community and a catalyst for future investment and development.

The proposed Casa De Oro Revitalization proposes to reduce Campo Road between Conrad Drive and Casa De Oro Boulevard / Granada Avenue from 4-lanes to 2-lanes, construct raised medians, provide buffered bike lanes, and construct on-street angled-parking. Additional improvements throughout the corridor include the following intersection modifications:

- Campo Road / Kenwood Drive – Provide improved pedestrian crossings and raised medians to channelize turning vehicles and improve safety
- Campo Road / Conrad Drive – Construct southern roadway extension (New Street A) between Campo Road and existing alley (Kenora Drive extension).
- Campo Road / New Road B – Construct new roadway (New Street B) between San Juan Street and existing alley (Kenora Drive extension). Construct new single-lane roundabout at the intersection with Campo Road.
- Campo Road / New Road C - Construct new roadway (New Street C) between San Juan Street and existing alley (Kenora Drive extension). Construct pedestrian crossing (HAWK or Pedestrian Signal) at the intersection to Campo Road. Northbound and southbound approaches will have restricted left-turn-movements and will be left/right-in and right-out only operations with stop controls on the minor street. Campo Road will have free movements through this intersection.
- Campo Road / Bonita Street – Remove existing signal and construct new single-lane roundabout. Provide improved pedestrian facilities.
- Campo Road / Barcelona Street – Remove existing signal and construct new single-lane roundabout. Provide improved pedestrian facilities.
- Campo Road / Cordoba Avenue – Construct a raised median through this intersection. Northbound and southbound approaches will have restricted left-turn-movements and will be left/right-in and right-out only operations with stop controls on the minor street. Campo Road will have free movements through this intersection.
- Campo Road / Casa De Oro Boulevard / Granada Avenue – Remove existing traffic signal and construct new modified single-lane roundabout with slip-lanes. Provide improved pedestrian facilities.

Exhibit 13 shows the proposed Campo Road Corridor Concept Plan.

Not to Scale

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Proposed Campo Road Corridor Concept Plan

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Exhibit 13

4.1.1 Horizon Year 2035 With Project Study Area

For the purposes of the Horizon Year 2035 With Project traffic conditions assessment, the study area was reduced to include the following intersection locations along the Campo Road study corridor:

4. Campo Road / Kenwood Drive
5. Campo Road / Conrad Drive
A. Campo Road / New Road A
B. Campo Road / New Road B (intersection alternative)
6. Campo Road / Bonita Street
7. Campo Road / Barcelona Street
8. Campo Road / Cordoba Avenue
9. Campo Road / Casa De Oro Boulevard / Granada Avenue

Exhibit 14 shows the intersection lane geometry shown in the proposed Campo Road corridor plan and assumed in this analysis.

Roadway segment level of service standards based on daily traffic volumes are generally used as long-range planning guidelines to determine the functional classification of roadways and are not always accurate indicators of roadway operations during the more critical peak periods.Typically, the performance and level of service of a roadway segment is heavily influenced by the ability of intersections to accommodate peak hour volumes. Therefore, peak hour signalized and un-signalized intersections within the study area are the focus of Horizon Year 2035 With Project traffic conditions assessment since intersections are most influential in controlling the movement of vehicles along road segments.

4.2 HORIZON YEAR 2035 WITH PROJECT TRAFFIC VOLUMES

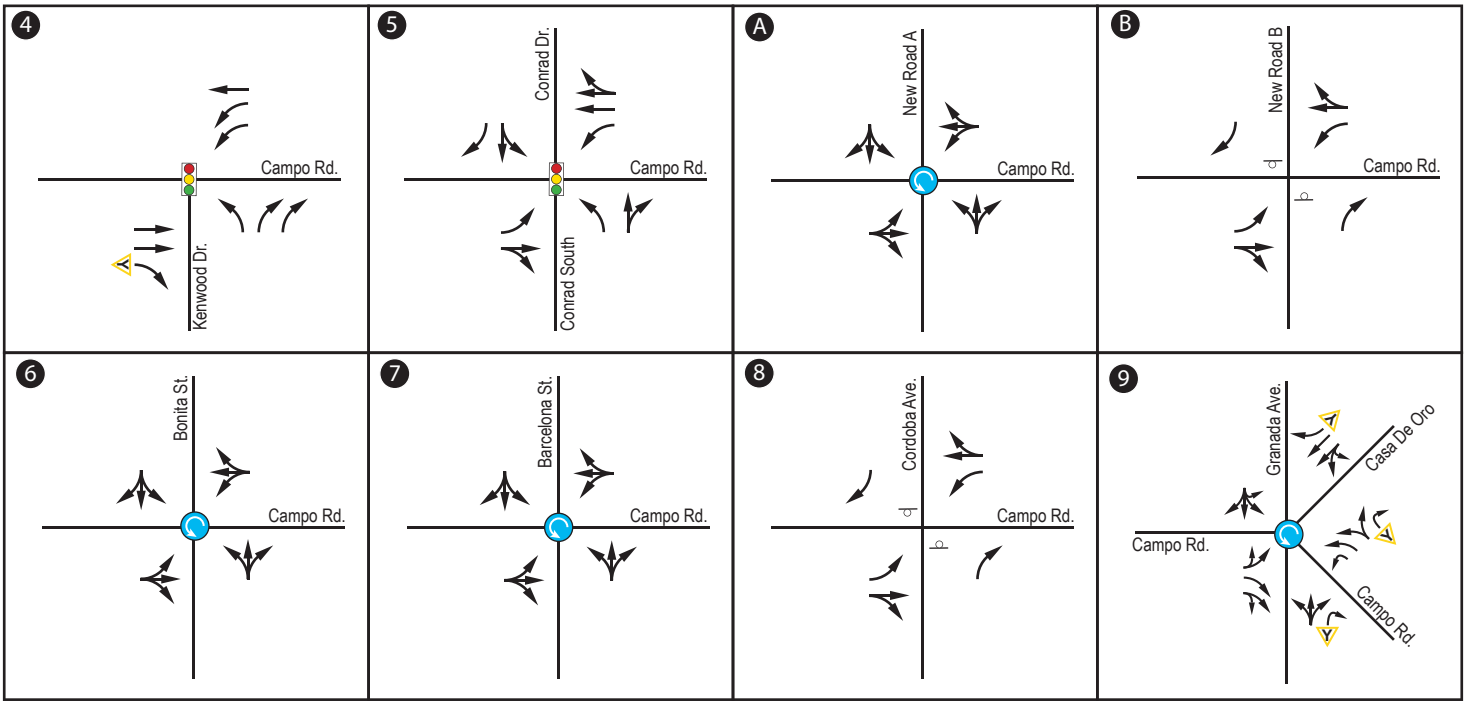
In order to derive baseline Horizon Year 2035 traffic volumes, the SANDAG Series 13 model daily traffic volumes available online at the Transportation Forecast Information Center (TFIC) were used to establish a forecast growth trend that was applied to existing traffic volumes. From the Series 13 model, a growth rate of 1.11% was calculated from the model baseline year 2016 to year 2025 and 0.77% from 2025 to 2035. These growth rates were applied to existing traffic volumes for 6 years (2019-2025) and 10 years (2025-2035) respectively to develop Horizon Year 2035 without project AM and PM peak hour volumes.

This traffic forecast methodology represents a conservative estimate of conditions with the currently proposed land use scenarios for the following reasons:

1. The SANDAG Series 13 model includes land use projections that are consistent with the previous Casa de Oro community plan and the previously approved land use plan proposed a significantly higher development density than the currently proposed land use concepts.
2. The year 2035 forecast likely reflects a development level that is less than build-out of the previously approved land use plan. Due to the higher development density reflected in the previous area land use plan, even a partial build out of that land use plan would likely represent development levels that are consistent with full build out of the currently proposed land use concepts.

Based on the proposed roadway network, traffic volumes were applied to New Street A, New Street B, and New Street C utilizing SANDAG trip generation rates, area travel patterns, and engineering judgement. In addition, the restricted left-turns at New Street C and Cordoba Avenue require vehicles to make a U-turn at the adjacent streets. This shift in traffic volumes were accounted for under Horizon Year 2035 With Project Conditions.

Exhibit 15 shows the AM and PM peak hour traffic volumes at the study intersections for Horizon Year 2035 With Project Conditions.



Legend

= Signal Control Intersection
= Stop Control Intersection
TWLTL = Two-Way-Left-Turn-Lane
= Roundabout
= Yield Control Movement
D = Defacto Turn-Lane

Horizon Year 2035 With Project Assumed Lane Geometry

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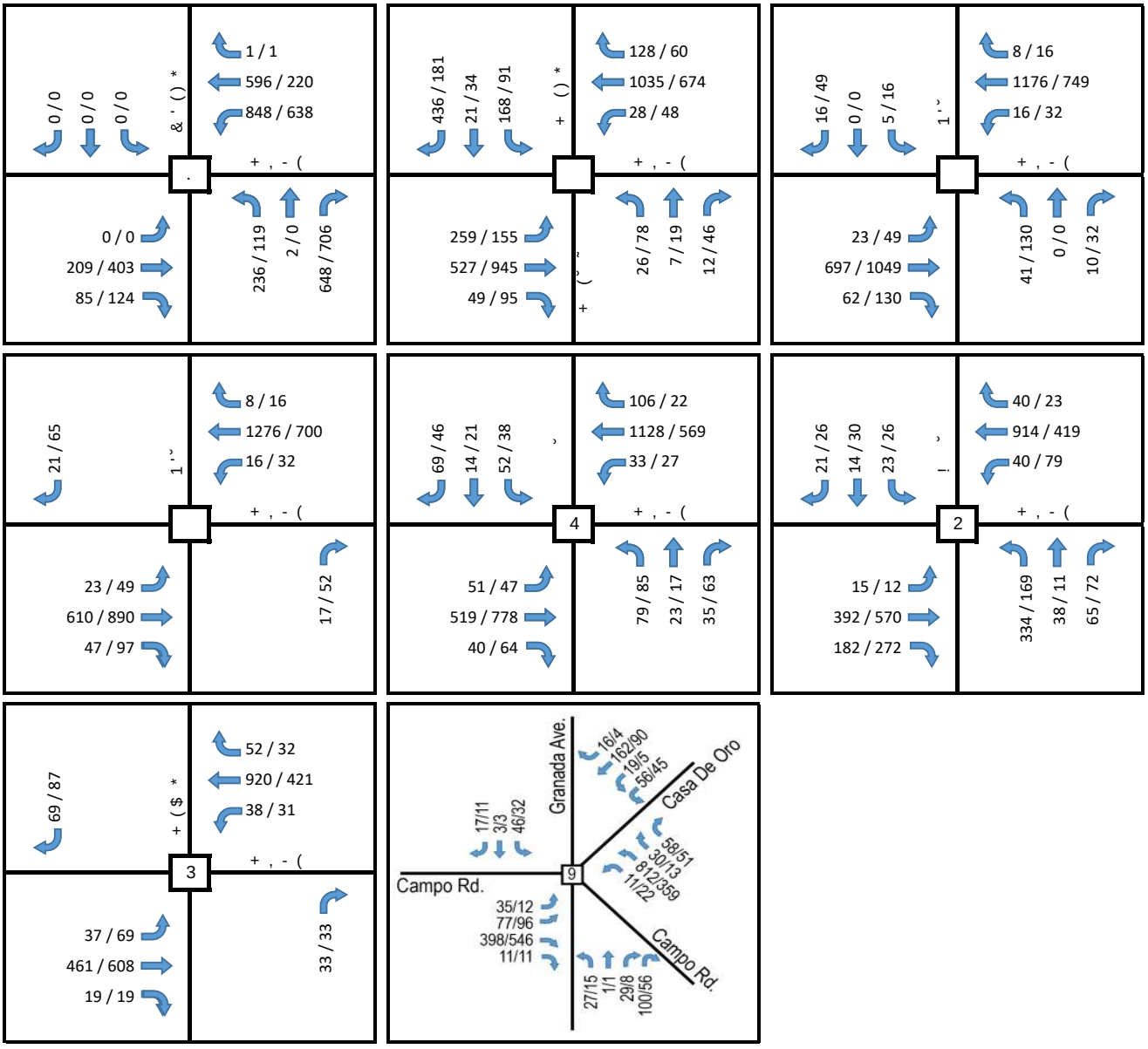
Exhibit 14



Notes:

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4.3 HORIZON YEAR 2035 WITH PROJECT INTERSECTION ANALYSIS

4.3.1 Preferred Campo Road Corridor Concept Plan

The Horizon Year 2035 With Project intersection analysis utilizes the same methodology as the Existing Conditions assessment which conforms to the operational analysis methodology outlined the *Highway Capacity Manual (HCM 6th Edition)* and performed utilizing *Synchro 10* and *Sidra 9* traffic analysis software.

Table 11 summarizes the Horizon Year 2035 With Project Conditions AM/PM peak hour level of service for all study intersections. Detailed analysis worksheets are contained in **Attachment G**.

TABLE 11 - HORIZON YEAR 2035 WITH PROJECT CONDITIONS AM/PM PEAK HOUR LOS

Study Intersection	Traffic Control	Horizon Year 2035 With Project	
		AM	PM
		Delay[1] - LOS	Delay[1] - LOS
4 - Campo Road / Kenwood Drive	Signal	17.5 - B	19.9 - B
5 - Campo Road / Conrad Drive	Signal	32.3 - C	20.8 - C
A - Campo Road / New Road A	ROBO	**56.8 - F**	**59.2 - F**
B - Campo Road / New Road B	TWSC	22.2 - C	12.3 - B
6 - Campo Road / Bonita Street	ROBO	**136.9 - F**	15.6 - C
7 - Campo Road / Barcelona Street	ROBO	**148.8 - F**	13.5 - B
8 - Campo Road / Cordoba Avenue	TWSC	28.8 - D	20.6 - C
9 - Campo Road / Granada Avenue / Casa de Oro Blvd	ROBO	32.6 - D	11.5 - B

Note: Deficient intersection operation indicated in **bold**.
[1] Average seconds of delay per vehicle.
LOS = level of service.
ROBO = Roundabout
TWSC = Two-Way Stop Control

4.4 SUMMARY & RECOMMENDATIONS

With the proposed corridor concept plan and the reduction to one travel lane in each direction, reduced crossing distance, lower vehicular speeds, and additional crosswalks, pedestrian safety and connectivity will be greatly improved. Reallocation of space dedicated to vehicular travel will create a more friendly bicycle community with the addition of buffered bike lanes and will also improve parking access by providing of on-street angled parking.

The results of the Horizon Year 2035 With Project peak hour intersection analysis shows all the study intersections will operate at acceptable levels of service (LOS D or better) with the exception of the following locations:

- Campo Road / New Road A (Roundabout) – LOS F during AM and PM peak hours
- Campo Road / Bonita Street (Roundabout) – LOS F during AM peak hour only
- Campo Road / Barcelona Street (Roundabout) – LOS F during AM peak hour only

The loss of a travel lane on Campo Road will have minimal operational affects in terms of vehicular delay except at some of the westerly located roundabouts where the traffic volumes are higher. While

roundabouts provide numerous benefits for all modes, the reported delay and slower vehicular speeds at the single lane entry roundabouts will also cause longer queues that may extend multiple blocks during peak periods. It should be noted that queueing at roundabouts tends to be dynamic vehicle queuing rather than stopped vehicle queuing. This means that the vehicles in the queue are moving at slow speeds and this type of delay is more tolerable to motorists than stopped delay.

Since the AM traffic patterns consist of a very short peak from 7:00 AM – 8:30 AM and most traffic at that time is comprised of commuters, we do not consider the peak period delays to be significant enough to offset the benefits to all modes offered by the roundabouts during non-peak periods. The PM peak period eastbound traffic peak is less pronounced and extends from 2:30 PM – 6:00 PM. It should be noted that the analysis does not consider the likely diversion of some peak hour commuter traffic shown on Campo Road to San Juan Street and the new east-west street south of Campo Road. This would reduce the peak westbound traffic flows and delay at the affected roundabouts. Additionally, there is an unknown impact of COVID-19 on "work from home" (telecommuting) trends in the future. It is evident that post-COVID-19 conditions will likely include an increase in telecommuting and a reduction in auto travel during the commuter peak hours.

The greatest concern shown in the analysis results is the forecast eastbound queuing on Campo Road at the approach to the proposed roundabout at New Street A during the PM peak hour. The analysis shows these queues will likely extend back into the Campo Road intersections and Conrad Drive and Kenwood Drive. The Kenwood Drive and Conrad Drive intersections serve the highest volumes of traffic along the Campo Road corridor and it is important to maintain adequate traffic flow at these intersections during peak periods.

Based on the operations analysis findings, it is recommended that the type of intersection traffic control at Street A include a non-roundabout alternative and the final intersection control selection be deferred to a later phase of corridor implementation. The alternative intersection configuration and control at Street A could be a Two-Way Stop intersection that only allows left turns from Campo Road onto New Street A (similar to that at New Street B). Once telecommuting trends have stabilized, forecast traffic during the PM peak can be re-visited and the preferred intersection control for Street A can be made.

The poor Level of Service during the AM peak hour at the Bonita Street and Barcelona Street roundabouts primarily affect westbound traffic flow and alternative travel routes are available. Our recommendation at this time is to maintain the roundabouts. If signals are considered by the County as the preferred traffic control for the plan in lieu of the roundabouts, the highest priority for a signal from an operational viewpoint, would be the Bonita Street intersection. This would still maintain two roundabouts at the east end of the corridor and would not mix roundabout and signal-controlled intersections east of Bonita Street. It is generally not desirable to place signals between closely spaced roundabouts due to vehicle queuing concerns.

4.4.1 Operational Assessment of Alternative Intersection Controls

The following proposed intersections that were found to operate at LOS F during one or both of the peak periods were analyzed with an alternative traffic control for comparison and consideration and the results are summarized in **Table 12**. The alternative traffic controls include the following:

- New Road A – Two-Way Stop Control with raised medians to restrict left-turns on the northbound and southbound approach. Similar to assumed controls at New Road B and Cordoba Avenue.
- Bonita Street – Signal control with dedicated left turn lanes on Campo Road and shared left/through/right-lanes on Bonita Street.
- Barcelona Street – Signal control with dedicated left turn lanes on Campo Road and shared left/through/right-lanes on Barcelona Street.

TABLE 12 HORIZON YEAR 2035 WITH PROJECT ALTERNATIVE INTERSECTION OPERATIONS

Study Intersection	Horizon Year 2035 With Project			Horizon Year 2035 With Project Intersection Control Alternatives		
	Traffic Control	AM Delay[1] - LOS	PM Delay[1] - LOS	Traffic Control	AM Delay[1] - LOS	PM Delay[1] - LOS
A - Campo Road / New Road A	ROBO	**56.8 - F**	**59.2 - F**	TWSC	25.1 - D	34.6 - D
6 - Campo Road / Bonita Street	ROBO	**136.9 - F**	15.6 - C	Signal	54.0 - D	18.8 - B
7 - Campo Road / Barcelona Street	ROBO	**148.8 - F**	13.5 - B	Signal	28.9 - C	21.3 - C

Note: Deficient intersection operation indicated in **bold**.
[1] Average seconds of delay per vehicle.
LOS = level of service.
ROBO = Roundabout
TWSC = Two-Way Stop Control

As shown, the alternative traffic controls are shown to be operating at improved levels of service (LOS D or better).

5 CONCLUSIONS

5.1 EXISTING CONDITIONS SUMMARY

This report summarizes existing transportation conditions within the Casa de Oro community located in the Valle de Oro Community Planning Area of San Diego County. The study area is focused along approximately ¾ mile of Campo Road in the commercial corridor between Granada Avenue and Rogers Road and includes five (5) stop-controlled intersections, seven (7) signalized intersections, and ten (10) roadway segments.

Based on existing daily traffic counts, all roadway segments are shown to operate at an acceptable level of service.

The intersection analysis shows that half of the study intersections (6 out of 12) are currently operating at a deficient level of service (LOS E or F) and half are operating at LOS D or better during one or both peak hours.

The existing conditions assessment considers the physical roadway conditions and intersection operations as well as the current pedestrian, bicycle, and transit facilities within the study area.

In addition to the traffic operations analysis, this report also documents the existing parking conditions for on-street and off-street parking facilities serving the non-residential uses within the study area. A parking survey was conducted which collected existing inventory data as well as parking utilization in 1-hour increments for 7 hours. Existing parking supply rates and actual parking demand rates were calculated and compared to parking ratios per County code requirements.

The parking utilization survey shows that the peak parking demand occurs during the 2 o'clock hour where 900 spaces are occupied out of the total 1,969 spaces available. This represents a parking utilization of 45.7%.

5.2 HORIZON YEAR 2035 WITH PROJECT SUMMARY AND RECOMMENDATIONS

With the proposed corridor concept plan and the reduction to one travel lane in each direction, reduced crossing distance, lower vehicular speeds, and additional crosswalks, pedestrian safety and connectivity will be greatly improved. Reallocation of space dedicated to vehicular travel will create a more friendly bicycle community with the addition of buffered bike lanes and will also improve parking access by providing of on-street angled parking.

The results of the Horizon Year 2035 With Project peak hour intersection analysis shows all the study intersections will operate at acceptable levels of service (LOS D or better) with the exception of the following locations:

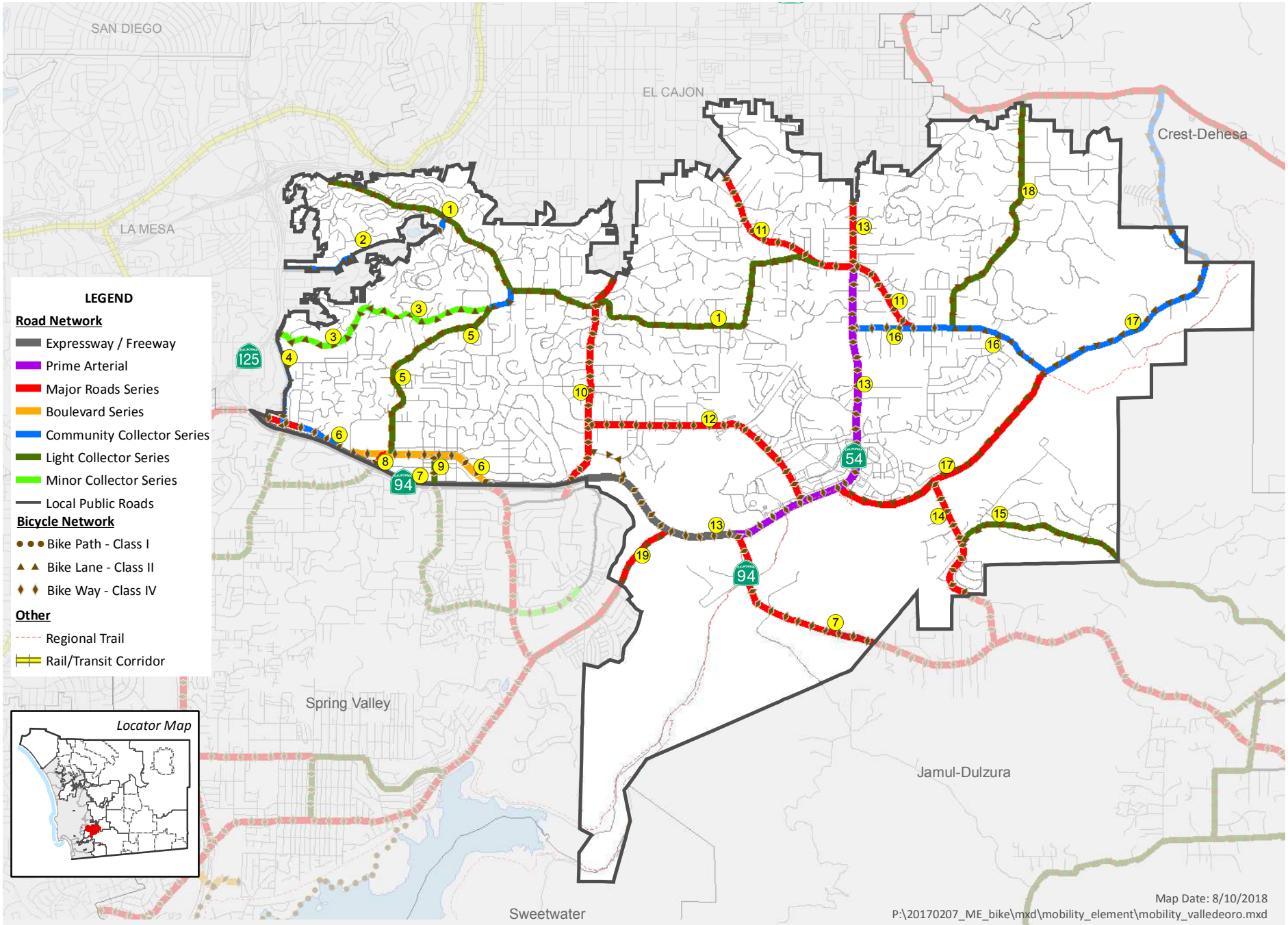
- Campo Road / New Road A (Roundabout) – LOS F during AM and PM peak hours
- Campo Road / Bonita Street (Roundabout) – LOS F during AM peak hour only
- Campo Road / Barcelona Street (Roundabout) – LOS F during AM peak hour only

These intersections were analyzed with an alternative traffic control for comparison and consideration and are shown to operate at improved levels of service (LOS D or better). The alternative traffic controls include the following:

- New Road A – Two-Way Stop Control with raised medians to restrict left-turns on the northbound and southbound approach. Similar to assumed controls at New Road B and Cordoba Avenue.
- Bonita Street – Signal control with dedicated left turn lanes on Campo Road and shared left/through/right-lanes on Bonita Street.
- Barcelona Street – Signal control with dedicated left turn lanes on Campo Road and shared left/through/right-lanes on Barcelona Street.

Michael Baker
INTERNATIONAL

Attachment A: Mobility Element Network & Matrix



VALLE DE ORO MOBILITY ELEMENT NETWORK

Mobility Element Network—Valle de Oro Community Planning Area Matrix			
ID[a]	Road Segment	Designation/Improvement #.#X = [# of lanes].[roadway classification][improvement]	Special Circumstances
1	Fuerte Drive (SC 2111/SA 920/SC 2060) Segment: La Mesa city limits to Chase Avenue	2.2E Light Collector	Accepted at LOS E Segment: Bancroft Drive to Avocado Boulevard
2	Lemon Avenue (SA 930) Segment: SR-125 to Fuerte Drive	2.1E Community Collector	None
3	Edgewood Drive / Grandview Drive (SC 2115) Segment: Bancroft Drive to Fuerte Drive	2.3B Minor Collector Road Intermittent Turn Lanes—Bancroft Drive to Resmar Road 2.1E Community Collector Resmar Road to Fuerte Drive	None
4	Bancroft Drive Segment:SR-94 to Edgewood Drive	2.1C Community Collector Intermittent Turn Lanes	None
5	Conrad Drive /Resmar Road (SC 2125) Segment: Campo Road to Grandview Drive	2.2E Community Collector	None
6	Campo Road (SC 2118) Segment: La Mesa city limits to SR-94	4.1B Major Road Intermittent Turn Lanes—La Mesa city limits to Camino Paz 2.1C Community Collector Intermittent Turn Lanes—Camino Paz to Rodgers Road 4.2B Boulevard Intermittent Turn Lanes—Rodgers Road to SR-94	Accepted at LOS F Segment: Kenwood Drive to Conrad Drive
7	State Route 94/Campo Road Segment: La Mesa city limits to Jamul/Dulzura Subregion boundary	Freeway/6.1 Expressway La Mesa city limits to Jamacha Road 4.1A Major Road and Interchange with Jamacha Road Raised Median—Jamacha Road / SR-54 to Jamul CPA boundary	Caltrans Facilities Programming Improvements to a four-lane conventional highway programmed in the 2030 RTP (Unconstrained Revenue scenario) Recommended Improvement Ramps to Jamacha Road interchange
8	Kenwood Drive (SC 2122) Segment: SR- 94 to Campo Road	4.1B Major Road Intermittent Turn Lanes	None

Mobility Element Network—Valle de Oro Community Planning Area Matrix			
ID[a]	Road Segment	Designation/Improvement #.#X = [# of lanes].[roadway classification][improvement]	Special Circumstances
9	Barcelona Street (SC 2110) Segment: Campo Road to SR- 94	2.2E Light Collector Intersection Improvements	None
10	Avocado Boulevard (SF 1398) Segment: Spring Valley community boundary to El Cajon city limits	4.1B Major Road Intermittent Turn Lanes	None
11	Chase Avenue (SA 910.1) Segment: El Cajon city limits to Hillsdale Road	4.1B Major Road Intermittent Turn Lanes	None
12	Fury Lane (SC 2070/SA 921) Segment: Avocado Boulevard to Jamacha Road	4.1B Major Road Intermittent Turn Lanes—Avocado Boulevard to Wieghorst Way 4.1A Major Road Raised Median—Wieghorst Way to Jamacha Road	None
13	Jamacha Road (SF 1399) Segment: -SR-94 / Campo Road to El Cajon city limits	6.2 Prime Arterial SR 94/Campo Road to Chase Avenue 4.1A Major Road Raised Median—Chase Avenue to El Cajon city limits	Accepted at LOS F Segment: SR-94 / Campo Road to Fury Lane
14	Steele Canyon Road (SC 2050) Segment: Willow Glen Drive to Jamul/Dulzura Subregion boundary	4.1B Major Road Intermittent Turn Lanes	None
15	Jamul Drive (SC 2055) Segment: Steele Canyon Road to Jamul/Dulzura Subregion boundary	2.1C Light Collector Intermittent Turn Lanes	None
16	Hillsdale Road (SC 2030) Segment: Jamacha Road to Willow Glen Drive	2.1C Community Collector Intermittent Turn Lanes	None

Mobility Element Network—Valle de Oro Community Planning Area Matrix			
ID[a]	**Road Segment**	**Designation/Improvement** #.#X = [# of lanes].[roadway classification][improvement]	**Special Circumstances**
17	Willow Glen Drive (SF 1397) Segment: Jamacha Road to Camino de las Piedras	4.1B Major Road Intermittent Turn Lanes—Jamacha Road to Hillsdale Road 2.1D Community Collector Improvement Options [Unspecified Improvements}—Hillsdale Road to Camino de las Piedras	None
18	Vista Grande Road (SC 2030) Segment: Hillsdale Road to Dehesa Road	2.2E Light Collector	None
19	Jamacha Boulevard SF 1397) Segment: Spring Valley CPA boundary to SR-94 / Campo Road	4.1A Major Road Raised Median	Recommended Improvement Grade-separated interchange with SR-94/Campo Road

a. ID = Roadway segment on Figure M-A-22

Michael Baker
INTERNATIONAL

Attachment B:
Traffic Volume Count Data

Prepared by National Data & Surveying Services

CLASSIFICATION

Kenwood Dr Bet. SR-94 WB Ramps & Kenora Dr

Day: Tuesday
Date: 11/12/2019

City: Spring Valley
Project #: CA19_4443_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	123	22	0	1	0	0	0	0	0	0	0	0	146
01:00	0	60	6	0	0	0	0	0	0	0	0	0	0	66
02:00	0	46	6	0	0	1	0	0	0	0	0	0	0	53
03:00	0	38	11	0	0	0	0	0	0	0	0	0	0	49
04:00	0	130	26	0	4	0	0	0	0	0	0	0	0	160
05:00	0	385	78	1	11	0	0	0	0	0	0	0	0	475
06:00	0	720	136	1	22	1	0	0	0	0	0	0	0	880
07:00	0	1254	227	3	32	1	0	2	0	0	0	0	0	1519
08:00	0	1256	250	4	36	1	0	1	0	0	0	0	0	1548
09:00	0	898	200	2	27	1	0	0	0	0	0	0	0	1128
10:00	0	929	195	2	33	0	0	0	0	0	0	0	0	1159
11:00	1	945	200	1	32	0	0	0	0	0	0	0	0	1179
12:00 PM	2	1128	224	1	32	3	0	0	0	0	0	0	0	1390
13:00	1	1299	259	2	31	0	0	0	0	0	0	0	0	1592
14:00	0	1426	282	2	43	0	0	2	0	0	0	0	0	1755
15:00	1	1354	287	2	46	1	0	1	0	0	0	0	0	1692
16:00	0	1241	248	0	35	0	0	0	0	0	0	0	0	1524
17:00	0	1261	233	2	28	0	0	2	0	0	0	0	0	1526
18:00	0	1063	178	1	23	1	0	1	0	0	0	0	0	1267
19:00	0	778	134	0	15	0	0	0	0	0	0	0	0	927
20:00	0	629	110	0	14	0	0	0	0	0	0	0	0	753
21:00	0	500	85	0	8	0	0	0	0	0	0	0	0	593
22:00	0	325	53	0	9	0	0	0	0	0	0	0	0	387
23:00	0	190	29	0	4	0	0	0	0	0	0	0	0	223
Totals	5	17978	3479	24	486	10		9						21991
% of Totals	0%	82%	16%	0%	2%	0%		0%						100%
AM Volumes	1	6784	1357	14	198	5	0	3	0	0	0	0	0	8362
% AM	0%	31%	6%	0%	1%	0%		0%						38%
AM Peak Hour	11:00	08:00	08:00	08:00	08:00	02:00		07:00						08:00
Volume	1	1256	250	4	36	1		2						1548
PM Volumes	4	11194	2122	10	288	5	0	6	0	0	0	0	0	13629
% PM	0%	51%	10%	0%	1%	0%		0%						62%
PM Peak Hour	12:00	14:00	15:00	13:00	15:00	12:00		14:00						14:00
Volume	2	1426	287	2	46	3		2						1755

Directional Peak Periods All Classes	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
	Volume		%	Volume		%	Volume		%	Volume		%
	3067	⟷	14%	2982	⟷	14%	3050	⟷	14%	12892	⟷	59%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

DAILY TOTALS	NB	SB	EB	WB	To
	10,423	11,568	0	0	21,

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TO
00:00	26		19		0	0	45		12:00	158		173		0	0	331
00:15	27		11		0	0	38		12:15	165		173		0	0	338
00:30	23		23		0	0	46		12:30	162		183		0	0	345
00:45	10	86	7	60	0	0	17	146	12:45	203	688	173	702	0	0	376
01:00	10		13		0	0	23		13:00	161		262		0	0	423
01:15	10		8		0	0	18		13:15	143		239		0	0	382
01:30	8		3		0	0	11		13:30	177		209		0	0	386
01:45	10	38	4	28	0	0	14	66	13:45	200	681	201	911	0	0	401
02:00	6		4		0	0	10		14:00	204		222		0	0	426
02:15	4		4		0	0	8		14:15	215		239		0	0	454
02:30	11		16		0	0	27		14:30	215		248		0	0	463
02:45	5	26	3	27	0	0	8	53	14:45	193	827	219	928	0	0	412
03:00	6		7		0	0	13		15:00	188		233		0	0	421
03:15	5		5		0	0	10		15:15	205		247		0	0	452
03:30	5		11		0	0	16		15:30	204		212		0	0	416
03:45	5	21	5	28	0	0	10	49	15:45	187	784	216	908	0	0	403
04:00	8		14		0	0	22		16:00	197		164		0	0	361
04:15	11		25		0	0	36		16:15	195		194		0	0	389
04:30	12		36		0	0	48		16:30	196		197		0	0	393
04:45	19	50	35	110	0	0	54	160	16:45	187	775	194	749	0	0	381
05:00	22		51		0	0	73		17:00	196		203		0	0	399
05:15	29		70		0	0	99		17:15	192		192		0	0	384
05:30	43		85		0	0	128		17:30	191		184		0	0	375
05:45	56	150	119	325	0	0	175	475	17:45	194	773	174	753	0	0	368
06:00	78		128		0	0	206		18:00	174		154		0	0	328
06:15	74		133		0	0	207		18:15	173		164		0	0	337
06:30	90		128		0	0	218		18:30	162		151		0	0	313
06:45	119	361	130	519	0	0	249	880	18:45	133	642	156	625	0	0	289
07:00	124		194		0	0	318		19:00	132		118		0	0	250
07:15	154		167		0	0	321		19:15	130		129		0	0	259
07:30	227		195		0	0	422		19:30	113		102		0	0	215
07:45	225	730	233	789	0	0	458	1519	19:45	98	473	105	454	0	0	203
08:00	183		250		0	0	433		20:00	99		85		0	0	184
08:15	174		209		0	0	383		20:15	94		107		0	0	201
08:30	169		247		0	0	416		20:30	113		94		0	0	207
08:45	126	652	190	896	0	0	316	1548	20:45	80	386	81	367	0	0	161
09:00	134		151		0	0	285		21:00	88		77		0	0	165
09:15	135		127		0	0	262		21:15	82		63		0	0	145
09:30	107		173		0	0	280		21:30	94		65		0	0	159
09:45	146	522	155	606	0	0	301	1128	21:45	74	338	50	255	0	0	124
10:00	114		159		0	0	273		22:00	59		63		0	0	122
10:15	144		155		0	0	299		22:15	54		55		0	0	109
10:30	136		154		0	0	290		22:30	40		39		0	0	79
10:45	126	520	171	639	0	0	297	1159	22:45	38	191	39	196	0	0	77
11:00	135		160		0	0	295		23:00	41		37		0	0	78
11:15	137		146		0	0	283		23:15	30		21		0	0	51
11:30	153		137		0	0	290		23:30	27		22		0	0	49
11:45	154	579	157	600	0	0	311	1179	23:45	32	130	13	93	0	0	45
TOTALS		3735		4627				8362	TOTALS		6688		6941			
SPLIT %		44.7%		55.3%				38.0%	SPLIT %		49.1%		50.9%			

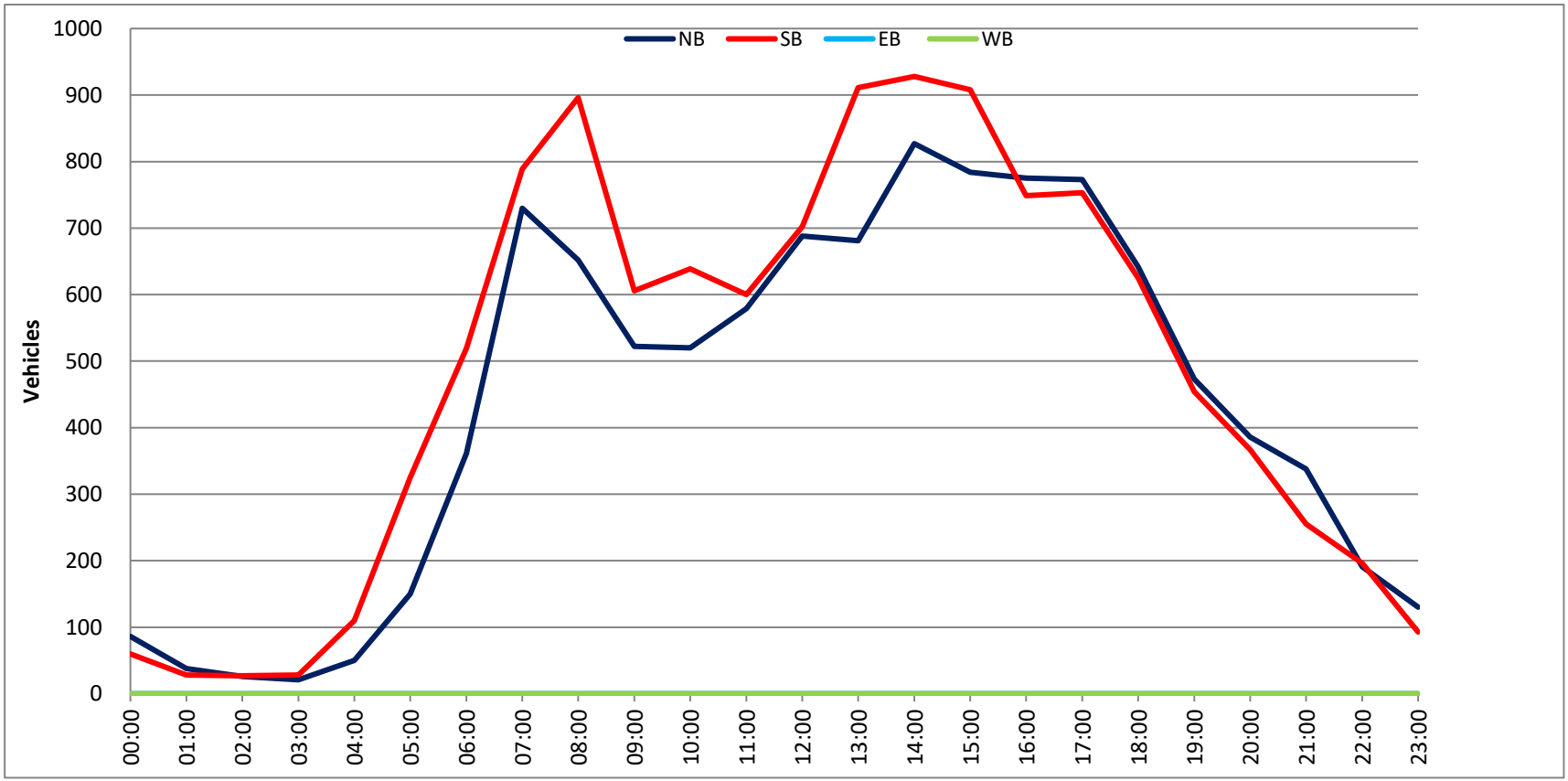
DAILY TOTALS	NB	SB	EB	WB	To
	10,423	11,568	0	0	21,

AM Peak Hour	07:30	07:45			07:30	PM Peak Hour	13:45	14:30			
AM Pk Volume	809	939			1696	PM Pk Volume	834	947			
Pk Hr Factor	0.891	0.939			0.926	Pk Hr Factor	0.970	0.955			
7 - 9 Volume	1382	1685	0	0	3067	4 - 6 Volume	1548	1502	0	0	
7 - 9 Peak Hour	07:30	07:45			07:30	4 - 6 Peak Hour	16:00	16:15			
7 - 9 Pk Volume	809	939	0	0	1696	4 - 6 Pk Volume	775	788	0	0	
Pk Hr Factor	0.891	0.939	0.000	0.000	0.926	Pk Hr Factor	0.984	0.970	0.000	0.000	

Prepared by National Data & Surveying Services

Project #: CA19_4443_001 **City:** Spring Valley

Location: Kenwood Dr Bet. SR-94 WB Ramps & Kenora **Date:** 11/12/2019



Prepared by National Data & Surveying Services

CLASSIFICATION

Campo Rd Bet. Kenwood Dr & Conrad Dr

Day: Tuesday
Date: 11/12/2019

City: Spring Valley
Project #: CA19_4443_002

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	112	17	0	2	0	0	0	0	0	0	0	0	131
01:00	0	53	13	0	1	0	0	0	0	0	0	0	0	67
02:00	0	45	12	0	1	0	0	0	1	0	0	0	0	59
03:00	0	36	9	0	0	0	0	0	0	0	0	0	0	45
04:00	0	110	27	0	3	0	0	0	0	0	0	0	0	140
05:00	0	352	88	4	12	0	0	1	0	0	0	0	0	457
06:00	0	688	158	6	39	0	1	0	2	0	0	0	0	894
07:00	0	1370	278	9	52	4	0	0	0	0	0	0	0	1713
08:00	0	1419	293	6	57	0	0	1	2	0	0	0	0	1778
09:00	0	895	170	5	29	1	0	0	0	0	0	0	0	1100
10:00	0	976	186	6	35	1	0	1	2	0	0	0	0	1207
11:00	0	1017	198	6	39	1	0	1	0	0	0	0	0	1262
12:00 PM	0	1190	217	5	43	2	0	0	0	0	0	0	0	1457
13:00	0	1278	251	8	47	0	1	0	2	0	0	0	0	1587
14:00	0	1407	320	7	57	0	0	0	1	0	0	0	0	1792
15:00	0	1393	284	6	43	2	0	2	0	0	0	0	0	1730
16:00	0	1386	254	6	42	2	0	0	0	0	0	0	0	1690
17:00	0	1425	230	4	34	0	1	1	0	0	0	0	0	1695
18:00	0	1127	207	3	26	1	0	0	0	0	0	0	0	1364
19:00	0	805	141	2	20	0	0	1	2	0	0	0	0	971
20:00	0	621	105	2	13	1	0	0	0	0	0	0	0	742
21:00	0	496	65	2	13	0	0	0	0	0	0	0	0	576
22:00	0	307	48	2	5	0	0	0	0	0	0	0	0	362
23:00	0	200	30	0	5	0	0	0	0	0	0	0	0	235
Totals		18708	3601	89	618	15	3	8	12					23054
% of Totals		81%	16%	0%	3%	0%	0%	0%	0%					100%
AM Volumes	0	7073	1449	42	270	7	1	4	7	0	0	0	0	8853
% AM		31%	6%	0%	1%	0%	0%	0%	0%					38%
AM Peak Hour		08:00	08:00	07:00	08:00	07:00	06:00	05:00	06:00					08:00
Volume		1419	293	9	57	4	1	1	2					1778
PM Volumes	0	11635	2152	47	348	8	2	4	5	0	0	0	0	14201
% PM		50%	9%	0%	2%	0%	0%	0%	0%					62%
PM Peak Hour		17:00	14:00	13:00	14:00	12:00	13:00	15:00	13:00					14:00
Volume		1425	320	8	57	2	1	2	2					1792

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	3491	⟷	15%	3044	⟷	13%	3385	⟷	15%	13134	⟷	57%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

DAILY TOTALS	NB	SB	EB	WB	To
	0	0	11,746	11,308	23,

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOT
00:00	0	0	26		17		43		12:00	0	0	199		156		355
00:15	0	0	22		8		30		12:15	0	0	207		146		353
00:30	0	0	23		19		42		12:30	0	0	194		148		342
00:45	0	0	10	81	6	50	16	131	12:45	0	0	241	841	166	616	407
01:00	0	0	14		12		26		13:00	0	0	182		243		425
01:15	0	0	12		7		19		13:15	0	0	145		231		376
01:30	0	0	8		5		13		13:30	0	0	209		168		377
01:45	0	0	7	41	2	26	9	67	13:45	0	0	224	760	185	827	409
02:00	0	0	11		5		16		14:00	0	0	229		185		414
02:15	0	0	9		4		13		14:15	0	0	240		231		471
02:30	0	0	9		11		20		14:30	0	0	263		216		479
02:45	0	0	5	34	5	25	10	59	14:45	0	0	250	982	178	810	428
03:00	0	0	9		6		15		15:00	0	0	228		193		421
03:15	0	0	2		3		5		15:15	0	0	254		196		450
03:30	0	0	8		7		15		15:30	0	0	239		178		417
03:45	0	0	6	25	4	20	10	45	15:45	0	0	251	972	191	758	442
04:00	0	0	8		15		23		16:00	0	0	254		177		431
04:15	0	0	13		21		34		16:15	0	0	250		186		436
04:30	0	0	12		29		41		16:30	0	0	230		195		425
04:45	0	0	16	49	26	91	42	140	16:45	0	0	224	958	174	732	398
05:00	0	0	23		51		74		17:00	0	0	261		182		443
05:15	0	0	32		64		96		17:15	0	0	242		171		413
05:30	0	0	42		77		119		17:30	0	0	229		190		419
05:45	0	0	59	156	109	301	168	457	17:45	0	0	259	991	161	704	420
06:00	0	0	75		131		206		18:00	0	0	217		146		363
06:15	0	0	66		128		194		18:15	0	0	229		159		388
06:30	0	0	76		150		226		18:30	0	0	194		121		315
06:45	0	0	110	327	158	567	268	894	18:45	0	0	163	803	135	561	298
07:00	0	0	97		237		334		19:00	0	0	165		115		280
07:15	0	0	129		255		384		19:15	0	0	150		115		265
07:30	0	0	204		270		474		19:30	0	0	130		96		226
07:45	0	0	211	641	310	1072	521	1713	19:45	0	0	117	562	83	409	200
08:00	0	0	174		326		500		20:00	0	0	104		83		187
08:15	0	0	156		331		487		20:15	0	0	109		73		182
08:30	0	0	157		305		462		20:30	0	0	119		82		201
08:45	0	0	118	605	211	1173	329	1778	20:45	0	0	101	433	71	309	172
09:00	0	0	116		156		272		21:00	0	0	93		76		169
09:15	0	0	143		121		264		21:15	0	0	93		56		149
09:30	0	0	122		157		279		21:30	0	0	90		59		149
09:45	0	0	146	527	139	573	285	1100	21:45	0	0	70	346	39	230	109
10:00	0	0	128		146		274		22:00	0	0	67		45		112
10:15	0	0	172		148		320		22:15	0	0	55		45		100
10:30	0	0	146		164		310		22:30	0	0	49		35		84
10:45	0	0	147	593	156	614	303	1207	22:45	0	0	38	209	28	153	66
11:00	0	0	143		154		297		23:00	0	0	45		29		74
11:15	0	0	169		148		317		23:15	0	0	37		19		56
11:30	0	0	158		132		290		23:30	0	0	30		30		60
11:45	0	0	198	668	160	594	358	1262	23:45	0	0	30	142	15	93	45
TOTALS				3747		5106		8853	TOTALS				7999		6202	
SPLIT %				42.3%		57.7%		38.4%	SPLIT %				56.3%		43.7%	

DAILY TOTALS	NB	SB	EB	WB	To
	0	0	11,746	11,308	23,

AM Peak Hour			11:45	07:45	07:30	PM Peak Hour			15:15	13:00	
AM Pk Volume			798	1272	1982	PM Pk Volume			998	827	
Pk Hr Factor			0.964	0.961	0.951	Pk Hr Factor			0.982	0.851	
7 - 9 Volume	0	0	1246	2245	3491	4 - 6 Volume	0	0	1949	1436	
7 - 9 Peak Hour			07:30	07:45	07:30	4 - 6 Peak Hour			17:00	16:15	
7 - 9 Pk Volume	0	0	745	1272	1982	4 - 6 Pk Volume	0	0	991	737	
Pk Hr Factor	0.000	0.000	0.883	0.961	0.951	Pk Hr Factor	0.000	0.000	0.949	0.945	

Prepared by National Data & Surveying Services

Project #: CA19_4443_002 **City:** Spring Valley

Location: Campo Rd Bet. Kenwood Dr & Conrad Dr **Date:** 11/12/2019

Prepared by National Data & Surveying Services

CLASSIFICATION

Campo Rd 250' E/O Conrad Dr

Day: Tuesday
Date: 11/12/2019

City: Spring Valley
Project #: CA19_4443_003

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	106	11	0	0	0	0	0	0	0	0	0	0	117
01:00	0	59	9	0	1	0	0	0	0	0	0	0	0	69
02:00	0	46	10	0	1	0	0	0	0	0	0	0	0	57
03:00	0	37	7	0	0	0	0	0	0	0	0	0	0	44
04:00	0	80	17	0	1	0	0	0	0	0	0	0	0	98
05:00	0	274	53	4	3	0	0	0	0	0	0	0	0	334
06:00	2	594	95	10	21	1	0	1	0	0	0	0	0	724
07:00	1	1154	182	9	24	4	0	0	0	0	0	0	0	1374
08:00	6	1138	166	8	29	2	0	0	4	0	0	0	0	1353
09:00	0	765	109	4	18	2	0	0	0	0	0	0	0	898
10:00	0	831	122	6	22	2	0	1	1	0	0	0	0	985
11:00	0	883	126	6	21	0	0	0	0	0	0	0	0	1036
12:00 PM	3	1014	135	10	23	2	0	0	0	0	0	0	0	1187
13:00	1	1045	146	7	31	1	0	0	1	0	0	0	0	1232
14:00	0	1221	206	10	36	1	0	2	1	0	0	0	0	1477
15:00	1	1206	176	4	22	3	0	0	0	0	0	0	0	1412
16:00	0	1229	179	6	25	4	0	0	0	0	0	0	0	1443
17:00	0	1277	151	4	23	0	0	0	0	0	0	0	0	1455
18:00	2	1014	134	3	15	1	0	0	0	0	0	0	0	1169
19:00	0	730	106	2	10	0	0	0	0	0	0	0	0	848
20:00	0	573	74	2	6	1	0	0	0	0	0	0	0	656
21:00	0	462	46	2	11	0	0	0	0	0	0	0	0	521
22:00	0	300	32	2	3	0	0	0	0	0	0	0	0	337
23:00	0	187	17	0	3	0	0	0	0	0	0	0	0	207
Totals	16	16225	2309	99	349	24		4	7					19033
% of Totals	0%	85%	12%	1%	2%	0%		0%	0%					100%

AM Volumes	9	5967	907	47	141	11	0	2	5	0	0	0	0	7089
% AM	0%	31%	5%	0%	1%	0%		0%	0%					37%
AM Peak Hour	08:00	07:00	07:00	06:00	08:00	07:00		06:00	08:00					07:00
Volume	6	1154	182	10	29	4		1	4					1374
PM Volumes	7	10258	1402	52	208	13	0	2	2	0	0	0	0	11944
% PM	0%	54%	7%	0%	1%	0%		0%	0%					63%
PM Peak Hour	12:00	17:00	14:00	12:00	14:00	16:00		14:00	13:00					14:00
Volume	3	1277	206	10	36	4		2	1					1477

Directional Peak Periods All Classes	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	2727	14%	2419	13%	2898	15%	10989	58%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

DAILY TOTALS	NB	SB	EB	WB	To
	0	0	9,944	9,089	19,

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOT
00:00	0	0	25		16		41		12:00	0	0	167		136		303
00:15	0	0	19		9		28		12:15	0	0	173		121		294
00:30	0	0	17		17		34		12:30	0	0	150		123		273
00:45	0	0	7	68	7	49	14	117	12:45	0	0	190	680	127	507	317
01:00	0	0	12		12		24		13:00	0	0	160		193		353
01:15	0	0	9		7		16		13:15	0	0	121		169		290
01:30	0	0	10		4		14		13:30	0	0	164		139		303
01:45	0	0	11	42	4	27	15	69	13:45	0	0	154	599	132	633	286
02:00	0	0	8		6		14		14:00	0	0	176		155		331
02:15	0	0	5		3		8		14:15	0	0	213		164		377
02:30	0	0	10		13		23		14:30	0	0	237		160		397
02:45	0	0	8	31	4	26	12	57	14:45	0	0	226	852	146	625	372
03:00	0	0	9		3		12		15:00	0	0	181		155		336
03:15	0	0	2		3		5		15:15	0	0	209		152		361
03:30	0	0	9		6		15		15:30	0	0	223		125		348
03:45	0	0	8	28	4	16	12	44	15:45	0	0	209	822	158	590	367
04:00	0	0	4		9		13		16:00	0	0	216		152		368
04:15	0	0	10		13		23		16:15	0	0	229		153		382
04:30	0	0	9		22		31		16:30	0	0	195		150		345
04:45	0	0	13	36	18	62	31	98	16:45	0	0	208	848	140	595	348
05:00	0	0	18		35		53		17:00	0	0	232		140		372
05:15	0	0	25		46		71		17:15	0	0	201		135		336
05:30	0	0	28		53		81		17:30	0	0	223		155		378
05:45	0	0	43	114	86	220	129	334	17:45	0	0	236	892	133	563	369
06:00	0	0	49		103		152		18:00	0	0	184		117		301
06:15	0	0	43		108		151		18:15	0	0	190		138		328
06:30	0	0	72		128		200		18:30	0	0	155		108		263
06:45	0	0	82	246	139	478	221	724	18:45	0	0	160	689	117	480	277
07:00	0	0	75		202		277		19:00	0	0	149		99		248
07:15	0	0	100		211		311		19:15	0	0	135		108		243
07:30	0	0	143		236		379		19:30	0	0	112		81		193
07:45	0	0	170	488	237	886	407	1374	19:45	0	0	98	494	66	354	164
08:00	0	0	134		258		392		20:00	0	0	97		78		175
08:15	0	0	137		211		348		20:15	0	0	98		64		162
08:30	0	0	150		196		346		20:30	0	0	103		63		166
08:45	0	0	111	532	156	821	267	1353	20:45	0	0	97	395	56	261	153
09:00	0	0	95		120		215		21:00	0	0	85		68		153
09:15	0	0	113		110		223		21:15	0	0	80		47		127
09:30	0	0	89		132		221		21:30	0	0	95		48		143
09:45	0	0	121	418	118	480	239	898	21:45	0	0	65	325	33	196	98
10:00	0	0	100		128		228		22:00	0	0	62		38		100
10:15	0	0	147		132		279		22:15	0	0	49		44		93
10:30	0	0	116		126		242		22:30	0	0	47		35		82
10:45	0	0	126	489	110	496	236	985	22:45	0	0	41	199	21	138	62
11:00	0	0	103		133		236		23:00	0	0	42		27		69
11:15	0	0	137		129		266		23:15	0	0	28		21		49
11:30	0	0	141		114		255		23:30	0	0	30		21		51
11:45	0	0	152	533	127	503	279	1036	23:45	0	0	24	124	14	83	38
TOTALS				3025		4064		7089	TOTALS				6919		5025	
SPLIT %				42.7%		57.3%		37.2%	SPLIT %				57.9%		42.1%	

DAILY TOTALS	NB	SB	EB	WB	To
	0	0	9,944	9,089	19,

AM Peak Hour			11:45	07:15	07:30	PM Peak Hour			17:00	13:00	
AM Pk Volume			642	942	1526	PM Pk Volume			892	633	
Pk Hr Factor			0.928	0.913	0.937	Pk Hr Factor			0.945	0.820	
7 - 9 Volume	0	0	1020	1707	2727	4 - 6 Volume	0	0	1740	1158	
7 - 9 Peak Hour			07:45	07:15	07:30	4 - 6 Peak Hour			17:00	16:00	
7 - 9 Pk Volume	0	0	591	942	1526	4 - 6 Pk Volume	0	0	892	595	
Pk Hr Factor	0.000	0.000	0.869	0.913	0.937	Pk Hr Factor	0.000	0.000	0.945	0.972	

Prepared by National Data & Surveying Services

Project #: CA19_4443_003 **City:** Spring Valley

Location: Campo Rd 250' E/O Conrad Dr **Date:** 11/12/2019

Prepared by National Data & Surveying Services

CLASSIFICATION

Campo Rd Bet. Bonita St & Barcelona St

Day: Tuesday
Date: 11/12/2019

City: Spring Valley
Project #: CA19_4443_004

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	98	10	0	1	0	0	0	0	0	0	0	0	109
01:00	0	55	4	0	0	0	0	0	0	0	0	0	0	59
02:00	0	40	5	0	1	0	0	0	0	0	0	0	0	46
03:00	0	36	7	0	0	0	0	0	0	0	0	0	0	43
04:00	0	57	7	0	1	0	0	0	0	0	0	0	0	65
05:00	0	212	33	2	3	0	0	0	0	0	0	0	0	250
06:00	1	470	60	9	14	2	0	0	2	0	0	0	0	558
07:00	1	1103	134	6	20	4	0	0	0	0	0	0	0	1268
08:00	1	1233	151	5	25	0	0	2	3	0	0	0	0	1420
09:00	1	733	99	5	11	0	0	1	0	0	0	0	0	850
10:00	0	763	109	4	17	1	0	0	2	0	0	0	0	896
11:00	1	857	94	4	22	1	0	1	0	0	0	0	0	980
12:00 PM	3	907	126	6	20	1	0	0	0	0	0	0	0	1063
13:00	1	1020	125	7	21	2	0	0	2	0	0	0	0	1178
14:00	0	1117	161	8	20	2	0	0	0	0	0	0	0	1308
15:00	0	1118	130	4	13	1	0	0	0	0	0	0	0	1266
16:00	2	1119	142	6	15	2	0	0	1	0	0	0	0	1287
17:00	0	1118	112	4	13	0	0	0	0	0	0	0	0	1247
18:00	2	926	95	3	9	1	0	0	0	0	0	0	0	1036
19:00	0	636	65	2	9	0	0	0	0	0	0	0	0	712
20:00	0	496	44	2	5	0	0	0	0	0	0	0	0	547
21:00	0	382	32	2	0	0	0	0	0	0	0	0	0	416
22:00	0	245	20	2	0	0	0	0	0	0	0	0	0	267
23:00	0	161	13	0	2	0	0	0	0	0	0	0	0	176
Totals	13	14902	1778	81	242	17		4	10					17047
% of Totals	0%	87%	10%	0%	1%	0%		0%	0%					100%
AM Volumes	5	5657	713	35	115	8	0	4	7	0	0	0	0	6544
% AM	0%	33%	4%	0%	1%	0%		0%	0%					38%
AM Peak Hour	06:00	08:00	08:00	06:00	08:00	07:00		08:00	08:00					08:00
Volume	1	1233	151	9	25	4		2	3					1420
PM Volumes	8	9245	1065	46	127	9	0	0	3	0	0	0	0	10503
% PM	0%	54%	6%	0%	1%	0%			0%					62%
PM Peak Hour	12:00	16:00	14:00	14:00	13:00	13:00			13:00					14:00
Volume	3	1119	161	8	21	2			2					1308

Directional Peak Periods All Classes	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	2688	16%	2241	13%	2534	15%	9584	56%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by NDS/ATD

DAILY TOTALS	NB	SB	EB	WB	To
	0	0	8,649	8,398	17,

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOT
00:00	0	0	20		18		38		12:00	0	0	148		120		268
00:15	0	0	17		9		26		12:15	0	0	149		122		271
00:30	0	0	16		11		27		12:30	0	0	131		112		243
00:45	0	0	9	62	9	47	18	109	12:45	0	0	170	598	111	465	281
01:00	0	0	11		9		20		13:00	0	0	153		199		352
01:15	0	0	7		5		12		13:15	0	0	126		157		283
01:30	0	0	9		4		13		13:30	0	0	153		138		291
01:45	0	0	9	36	5	23	14	59	13:45	0	0	119	551	133	627	252
02:00	0	0	7		7		14		14:00	0	0	152		159		311
02:15	0	0	5		3		8		14:15	0	0	187		162		349
02:30	0	0	7		10		17		14:30	0	0	187		133		320
02:45	0	0	4	23	3	23	7	46	14:45	0	0	203	729	125	579	328
03:00	0	0	6		0		6		15:00	0	0	184		149		333
03:15	0	0	6		4		10		15:15	0	0	198		138		336
03:30	0	0	9		5		14		15:30	0	0	191		112		303
03:45	0	0	6	27	7	16	13	43	15:45	0	0	170	743	124	523	294
04:00	0	0	4		4		8		16:00	0	0	190		137		327
04:15	0	0	8		10		18		16:15	0	0	200		142		342
04:30	0	0	5		14		19		16:30	0	0	176		126		302
04:45	0	0	7	24	13	41	20	65	16:45	0	0	188	754	128	533	316
05:00	0	0	12		27		39		17:00	0	0	198		130		328
05:15	0	0	13		39		52		17:15	0	0	180		109		289
05:30	0	0	16		44		60		17:30	0	0	199		141		340
05:45	0	0	25	66	74	184	99	250	17:45	0	0	177	754	113	493	290
06:00	0	0	30		77		107		18:00	0	0	152		107		259
06:15	0	0	27		93		120		18:15	0	0	165		112		277
06:30	0	0	59		87		146		18:30	0	0	152		99		251
06:45	0	0	64	180	121	378	185	558	18:45	0	0	146	615	103	421	249
07:00	0	0	67		176		243		19:00	0	0	117		81		198
07:15	0	0	85		200		285		19:15	0	0	120		85		205
07:30	0	0	107		226		333		19:30	0	0	107		66		173
07:45	0	0	159	418	248	850	407	1268	19:45	0	0	86	430	50	282	136
08:00	0	0	129		344		473		20:00	0	0	81		61		142
08:15	0	0	120		273		393		20:15	0	0	91		54		145
08:30	0	0	130		188		318		20:30	0	0	93		46		139
08:45	0	0	93	472	143	948	236	1420	20:45	0	0	77	342	44	205	121
09:00	0	0	85		119		204		21:00	0	0	73		49		122
09:15	0	0	101		107		208		21:15	0	0	66		36		102
09:30	0	0	82		117		199		21:30	0	0	72		34		106
09:45	0	0	106	374	133	476	239	850	21:45	0	0	53	264	33	152	86
10:00	0	0	101		105		206		22:00	0	0	56		29		85
10:15	0	0	125		116		241		22:15	0	0	39		32		71
10:30	0	0	98		140		238		22:30	0	0	35		22		57
10:45	0	0	109	433	102	463	211	896	22:45	0	0	40	170	14	97	54
11:00	0	0	100		124		224		23:00	0	0	33		17		50
11:15	0	0	117		127		244		23:15	0	0	28		18		46
11:30	0	0	126		121		247		23:30	0	0	22		22		44
11:45	0	0	137	480	128	500	265	980	23:45	0	0	21	104	15	72	36
TOTALS				2595		3949		6544	TOTALS				6054		4449	
SPLIT %				39.7%		60.3%		38.4%	SPLIT %				57.6%		42.4%	

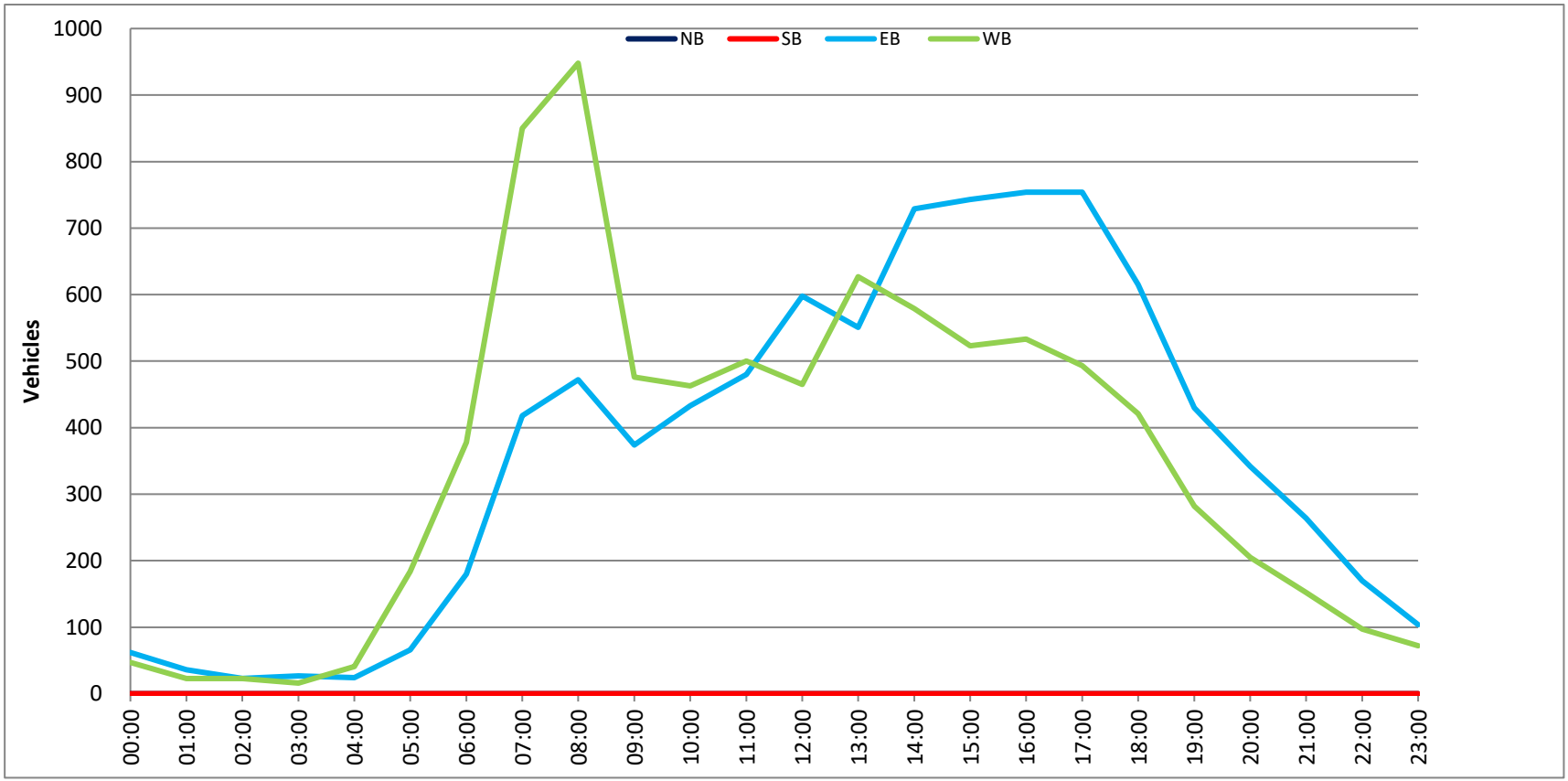
DAILY TOTALS	NB	SB	EB	WB	To
	0	0	8,649	8,398	17,

AM Peak Hour			11:45	07:30	07:30	PM Peak Hour	14:45	13:00
AM Pk Volume			565	1091	1606	PM Pk Volume	776	627
Pk Hr Factor			0.948	0.793	0.849	Pk Hr Factor	0.956	0.788
7 - 9 Volume	0	0	890	1798	2688	4 - 6 Volume	1508	1026
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour	16:45	16:00
7 - 9 Pk Volume	0	0	538	1091	1606	4 - 6 Pk Volume	765	533
Pk Hr Factor	0.000	0.000	0.846	0.793	0.849	Pk Hr Factor	0.961	0.938

Prepared by National Data & Surveying Services

Project #: CA19_4443_004 **City:** Spring Valley

Location: Campo Rd Bet. Bonita St & Barcelona St **Date:** 11/12/2019



Prepared by National Data & Surveying Services

CLASSIFICATION

Campo Rd Bet. Cordoba Ave & Granada Ave & Casa De Oro Blvd

Day: Tuesday
Date: 11/12/2019

City: Spring Valley
Project #: CA19_4443_005e

East Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	48	2	0	0	0	0	0	0	0	0	0	0	50
01:00	0	14	1	0	0	0	0	0	0	0	0	0	0	15
02:00	0	8	3	0	1	0	0	0	0	0	0	0	0	12
03:00	0	14	5	0	0	0	0	0	0	0	0	0	0	19
04:00	0	33	3	0	1	0	0	0	0	0	0	0	0	37
05:00	0	63	15	0	0	0	0	0	0	0	0	0	0	78
06:00	0	173	26	4	2	1	0	0	0	0	0	0	0	206
07:00	1	293	39	3	7	2	0	0	0	0	0	0	0	345
08:00	0	350	45	2	3	0	0	3	0	0	0	0	0	403
09:00	2	241	37	3	1	0	0	1	0	0	0	0	0	285
10:00	0	291	45	2	6	3	0	0	0	0	0	0	0	347
11:00	0	332	43	2	6	0	0	0	0	0	0	0	0	383
12:00 PM	0	377	47	4	6	0	0	0	0	0	0	0	0	434
13:00	0	377	59	3	8	1	0	0	0	0	0	0	0	448
14:00	0	473	59	2	7	0	0	0	0	0	0	0	0	541
15:00	0	496	56	2	8	0	0	0	0	0	0	0	0	562
16:00	0	464	52	4	5	0	0	0	0	0	0	0	0	525
17:00	0	463	43	2	6	0	0	0	0	0	0	0	0	514
18:00	1	364	40	2	2	0	0	0	0	0	0	0	0	409
19:00	0	247	20	1	0	0	0	0	0	0	0	0	0	268
20:00	0	212	19	1	0	0	0	0	0	0	0	0	0	232
21:00	0	137	11	1	0	0	0	0	0	0	0	0	0	149
22:00	0	103	8	1	0	0	0	0	0	0	0	0	0	112
23:00	0	75	6	0	1	0	0	0	0	0	0	0	0	82
Totals	**4**	**5648**	**684**	**39**	**70**	**7**		**4**						**6456**
% of Totals	0%	87%	11%	1%	1%	0%		0%						100%

AM Volumes	3	1860	264	16	27	6	0	4	0	0	0	0	0	2180
% AM	0%	29%	4%	0%	0%	0%		0%						34%
AM Peak Hour	09:00	08:00	08:00	06:00	07:00	10:00		08:00						08:00
Volume	2	350	45	4	7	3		3						403
PM Volumes	1	3788	420	23	43	1	0	0	0	0	0	0	0	4276
% PM	0%	59%	7%	0%	1%	0%								66%
PM Peak Hour	18:00	15:00	13:00	12:00	13:00	13:00								15:00
Volume	1	496	59	4	8	1								562

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	748		12%	882		14%	1039		16%	3787		59%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Campo Rd Bet. Granada Ave & Case De Oro Blvd & SR-94 WB Ramps

Day: Tuesday
Date: 11/12/2019

City: Spring Valley
Project #: CA19_4443_006

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	84	12	0	0	0	0	0	0	0	0	0	0	96
01:00	0	33	6	0	0	0	0	0	0	0	0	0	0	39
02:00	0	22	6	0	2	0	0	0	0	0	0	0	0	30
03:00	0	37	7	0	2	0	0	0	0	0	0	0	0	46
04:00	0	68	20	0	3	0	0	0	0	0	0	0	0	91
05:00	1	177	48	2	7	0	0	0	0	0	0	0	0	235
06:00	1	436	100	9	17	1	0	1	0	0	0	0	0	565
07:00	1	881	140	6	25	6	0	0	1	0	0	0	0	1060
08:00	1	907	162	4	18	2	0	0	3	0	0	0	0	1097
09:00	0	528	112	6	9	1	0	0	0	0	0	0	0	656
10:00	2	564	99	4	12	2	0	0	0	0	0	0	0	683
11:00	1	671	117	4	19	1	0	0	0	0	0	0	0	813
12:00 PM	3	697	110	7	16	0	0	0	0	0	0	0	0	833
13:00	0	715	131	6	19	2	0	1	0	0	0	0	0	874
14:00	4	914	151	8	18	1	0	0	0	0	0	0	0	1096
15:00	3	907	148	5	18	0	0	1	0	0	0	0	0	1082
16:00	2	806	115	8	14	1	0	0	0	0	0	0	0	946
17:00	2	813	108	4	13	0	0	0	0	0	0	0	0	940
18:00	1	661	93	3	13	0	0	0	0	0	0	0	0	771
19:00	0	481	60	2	7	0	0	0	0	0	0	0	0	550
20:00	0	372	53	2	5	0	0	0	0	0	0	0	0	432
21:00	0	264	38	2	2	0	0	0	0	0	0	0	0	306
22:00	0	180	21	2	0	0	0	0	0	0	0	0	0	203
23:00	0	131	19	0	2	0	0	0	2	0	0	0	0	154
Totals	22	11349	1876	84	241	17		3	6					13598
% of Totals	0%	83%	14%	1%	2%	0%		0%	0%					100%

AM Volumes	7	4408	829	35	114	13	0	1	4	0	0	0	0	5411
% AM	0%	32%	6%	0%	1%	0%		0%	0%					40%
AM Peak Hour	10:00	08:00	08:00	06:00	07:00	07:00		06:00	08:00					08:00
Volume	2	907	162	9	25	6		1	3					1097
PM Volumes	15	6941	1047	49	127	4	0	2	2	0	0	0	0	8187
% PM	0%	51%	8%	0%	1%	0%		0%	0%					60%
PM Peak Hour	14:00	14:00	14:00	14:00	13:00	13:00		13:00	23:00					14:00
Volume	4	914	151	8	19	2		1	2					1096

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	2157		16%	1707		13%	1886		14%	7848		58%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

DAILY TOTALS	NB	SB	EB	WB	To
	0	0	7,464	6,134	13,

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOT
00:00	0	0	11		13		24		12:00	0	0	111		100		211
00:15	0	0	14		13		27		12:15	0	0	121		91		212
00:30	0	0	10		17		27		12:30	0	0	108		93		201
00:45	0	0	11	46	7	50	18	96	12:45	0	0	117	457	92	376	209
01:00	0	0	6		11		17		13:00	0	0	140		99		239
01:15	0	0	0		3		3		13:15	0	0	129		103		232
01:30	0	0	7		2		9		13:30	0	0	123		84		207
01:45	0	0	4	17	6	22	10	39	13:45	0	0	104	496	92	378	196
02:00	0	0	6		4		10		14:00	0	0	147		81		228
02:15	0	0	5		6		11		14:15	0	0	166		121		287
02:30	0	0	2		2		4		14:30	0	0	170		120		290
02:45	0	0	4	17	1	13	5	30	14:45	0	0	164	647	127	449	291
03:00	0	0	3		2		5		15:00	0	0	143		113		256
03:15	0	0	5		1		6		15:15	0	0	161		155		316
03:30	0	0	13		1		14		15:30	0	0	147		117		264
03:45	0	0	10	31	11	15	21	46	15:45	0	0	132	583	114	499	246
04:00	0	0	9		4		13		16:00	0	0	140		105		245
04:15	0	0	13		3		16		16:15	0	0	134		85		219
04:30	0	0	21		5		26		16:30	0	0	132		109		241
04:45	0	0	21	64	15	27	36	91	16:45	0	0	163	569	78	377	241
05:00	0	0	36		12		48		17:00	0	0	166		122		288
05:15	0	0	27		12		39		17:15	0	0	123		99		222
05:30	0	0	50		24		74		17:30	0	0	139		89		228
05:45	0	0	45	158	29	77	74	235	17:45	0	0	118	546	84	394	202
06:00	0	0	60		37		97		18:00	0	0	127		95		222
06:15	0	0	77		55		132		18:15	0	0	115		72		187
06:30	0	0	86		64		150		18:30	0	0	105		83		188
06:45	0	0	108	331	78	234	186	565	18:45	0	0	88	435	86	336	174
07:00	0	0	103		115		218		19:00	0	0	97		60		157
07:15	0	0	99		139		238		19:15	0	0	86		69		155
07:30	0	0	100		163		263		19:30	0	0	73		50		123
07:45	0	0	170	472	171	588	341	1060	19:45	0	0	69	325	46	225	115
08:00	0	0	134		199		333		20:00	0	0	67		55		122
08:15	0	0	141		143		284		20:15	0	0	49		62		111
08:30	0	0	137		120		257		20:30	0	0	66		46		112
08:45	0	0	118	530	105	567	223	1097	20:45	0	0	46	228	41	204	87
09:00	0	0	93		90		183		21:00	0	0	48		35		83
09:15	0	0	81		71		152		21:15	0	0	47		40		87
09:30	0	0	77		68		145		21:30	0	0	35		35		70
09:45	0	0	97	348	79	308	176	656	21:45	0	0	32	162	34	144	66
10:00	0	0	83		74		157		22:00	0	0	30		29		59
10:15	0	0	95		70		165		22:15	0	0	25		23		48
10:30	0	0	107		85		192		22:30	0	0	22		27		49
10:45	0	0	84	369	85	314	169	683	22:45	0	0	28	105	19	98	47
11:00	0	0	110		85		195		23:00	0	0	22		20		42
11:15	0	0	115		96		211		23:15	0	0	26		16		42
11:30	0	0	108		93		201		23:30	0	0	18		12		30
11:45	0	0	108	441	98	372	206	813	23:45	0	0	21	87	19	67	40
TOTALS				2824		2587		5411	TOTALS				4640		3547	
SPLIT %				52.2%		47.8%		39.8%	SPLIT %				56.7%		43.3%	

DAILY TOTALS	NB	SB	EB	WB	To
	0	0	7,464	6,134	13,

AM Peak Hour			07:45	07:30	07:30	PM Peak Hour	14:00	14:30
AM Pk Volume			582	676	1221	PM Pk Volume	647	515
Pk Hr Factor			0.856	0.849	0.895	Pk Hr Factor	0.951	0.831
7 - 9 Volume	0	0	1002	1155	2157	4 - 6 Volume	1115	771
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour	16:15	16:30
7 - 9 Pk Volume	0	0	582	676	1221	4 - 6 Pk Volume	595	408
Pk Hr Factor	0.000	0.000	0.856	0.849	0.895	Pk Hr Factor	0.896	0.836

Prepared by National Data & Surveying Services

Project #: CA19_4443_006 **City:** Spring Valley

Location: Campo Rd Bet. Granada Ave & Case De Oro **Date:** 11/12/2019

Prepared by National Data & Surveying Services

CLASSIFICATION

Conrad Dr N/O Campo Rd

Day: Tuesday
Date: 11/12/2019

City: Spring Valley
Project #: CA19_4443_007

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	25	0	0	0	0	0	0	0	0	0	0	0	25
01:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
02:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
03:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
04:00	0	24	2	0	0	0	0	0	0	0	0	0	0	26
05:00	0	134	10	0	0	0	0	0	0	0	0	0	0	144
06:00	0	223	11	0	0	1	0	0	0	0	0	0	0	235
07:00	0	506	44	1	3	0	0	0	0	0	0	0	0	554
08:00	0	703	61	1	5	0	0	0	0	0	0	0	0	770
09:00	0	236	30	0	1	0	0	0	0	0	0	0	0	267
10:00	0	227	22	2	6	0	0	0	0	0	0	0	0	257
11:00	0	269	8	0	2	1	0	0	0	0	0	0	0	280
12:00 PM	0	322	33	2	6	2	0	0	0	0	0	0	0	365
13:00	0	455	40	0	3	0	0	0	0	0	0	0	0	498
14:00	1	527	54	2	3	0	0	0	0	0	0	0	0	587
15:00	0	338	27	1	0	0	0	0	0	0	0	0	0	366
16:00	0	351	36	0	2	0	0	0	0	0	0	0	0	389
17:00	0	328	30	1	0	0	0	0	0	0	0	0	0	359
18:00	0	202	22	0	0	0	0	0	0	0	0	0	0	224
19:00	1	137	8	0	0	0	0	0	0	0	0	0	0	146
20:00	0	132	12	0	0	0	0	0	0	0	0	0	0	144
21:00	0	85	5	0	0	0	0	0	0	0	0	0	0	90
22:00	0	68	5	0	0	0	0	0	0	0	0	0	0	73
23:00	0	26	3	0	1	0	0	0	0	0	0	0	0	30
Totals	**2**	**5341**	**464**	**10**	**32**	**4**								**5853**
% of Totals	0%	91%	8%	0%	1%	0%								100%

AM Volumes	0	2370	189	4	17	2	0	0	0	0	0	0	0	2582
% AM		40%	3%	0%	0%	0%								44%
AM Peak Hour		08:00	08:00	10:00	10:00	06:00								08:00
Volume		703	61	2	6	1								770
PM Volumes	2	2971	275	6	15	2	0	0	0	0	0	0	0	3271
% PM	0%	51%	5%	0%	0%	0%								56%
PM Peak Hour	14:00	14:00	14:00	12:00	12:00	12:00								14:00
Volume	1	527	54	2	6	2								587

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1324		23%	863		15%	748		13%	2918		50%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

DAILY TOTALS	NB	SB	EB	WB	To
	2,758	3,095	0	0	5,8

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TO
00:00	3		3		0	0	6		12:00	43		40		0	0	83
00:15	6		1		0	0	7		12:15	45		48		0	0	93
00:30	6		2		0	0	8		12:30	58		40		0	0	98
00:45	3	18	1	7	0	0	4	25	12:45	58	204	33	161	0	0	91
01:00	2		1		0	0	3		13:00	53		88		0	0	141
01:15	4		1		0	0	5		13:15	47		78		0	0	125
01:30	0		1		0	0	1		13:30	51		43		0	0	94
01:45	1	7	0	3	0	0	1	10	13:45	72	223	66	275	0	0	138
02:00	2		0		0	0	2		14:00	75		60		0	0	135
02:15	1		1		0	0	2		14:15	79		129		0	0	208
02:30	2		0		0	0	2		14:30	58		69		0	0	127
02:45	0	5	1	2	0	0	1	7	14:45	58	270	59	317	0	0	117
03:00	1		2		0	0	3		15:00	50		53		0	0	103
03:15	0		2		0	0	2		15:15	41		58		0	0	99
03:30	0		1		0	0	1		15:30	23		49		0	0	72
03:45	0	1	1	6	0	0	1	7	15:45	43	157	49	209	0	0	92
04:00	0		2		0	0	2		16:00	43		30		0	0	73
04:15	1		5		0	0	6		16:15	44		49		0	0	93
04:30	1		7		0	0	8		16:30	54		65		0	0	119
04:45	3	5	7	21	0	0	10	26	16:45	49	190	55	199	0	0	104
05:00	2		19		0	0	21		17:00	38		62		0	0	100
05:15	9		13		0	0	22		17:15	36		48		0	0	84
05:30	8		33		0	0	41		17:30	34		53		0	0	87
05:45	28	47	32	97	0	0	60	144	17:45	42	150	46	209	0	0	88
06:00	20		39		0	0	59		18:00	27		38		0	0	65
06:15	29		26		0	0	55		18:15	29		24		0	0	53
06:30	17		35		0	0	52		18:30	32		21		0	0	53
06:45	35	101	34	134	0	0	69	235	18:45	26	114	27	110	0	0	53
07:00	37		49		0	0	86		19:00	22		22		0	0	44
07:15	50		49		0	0	99		19:15	23		17		0	0	40
07:30	87		79		0	0	166		19:30	21		14		0	0	35
07:45	84	258	119	296	0	0	203	554	19:45	15	81	12	65	0	0	27
08:00	97		96		0	0	193		20:00	17		13		0	0	30
08:15	100		113		0	0	213		20:15	18		15		0	0	33
08:30	122		140		0	0	262		20:30	23		22		0	0	45
08:45	43	362	59	408	0	0	102	770	20:45	21	79	15	65	0	0	36
09:00	26		35		0	0	61		21:00	18		11		0	0	29
09:15	29		31		0	0	60		21:15	16		9		0	0	25
09:30	36		41		0	0	77		21:30	10		9		0	0	19
09:45	28	119	41	148	0	0	69	267	21:45	9	53	8	37	0	0	17
10:00	28		30		0	0	58		22:00	12		8		0	0	20
10:15	26		31		0	0	57		22:15	16		6		0	0	22
10:30	27		48		0	0	75		22:30	10		11		0	0	21
10:45	27	108	40	149	0	0	67	257	22:45	7	45	3	28	0	0	10
11:00	33		33		0	0	66		23:00	3		1		0	0	4
11:15	34		37		0	0	71		23:15	9		3		0	0	12
11:30	30		27		0	0	57		23:30	5		3		0	0	8
11:45	42	139	44	141	0	0	86	280	23:45	5	22	1	8	0	0	6
TOTALS		1170		1412				2582	TOTALS		1588		1683			
SPLIT %		45.3%		54.7%				44.1%	SPLIT %		48.5%		51.5%			

DAILY TOTALS	NB	SB	EB	WB	To
	2,758	3,095	0	0	5,8

AM Peak Hour	07:45	07:45			07:45	PM Peak Hour	13:45	13:45			
AM Pk Volume	403	468			871	PM Pk Volume	284	324			
Pk Hr Factor	0.826	0.836			0.831	Pk Hr Factor	0.899	0.628			
7 - 9 Volume	620	704	0	0	1324	4 - 6 Volume	340	408	0	0	
7 - 9 Peak Hour	07:45	07:45			07:45	4 - 6 Peak Hour	16:00	16:15			
7 - 9 Pk Volume	403	468	0	0	871	4 - 6 Pk Volume	190	231	0	0	
Pk Hr Factor	0.826	0.836	0.000	0.000	0.831	Pk Hr Factor	0.880	0.888	0.000	0.000	

Prepared by National Data & Surveying Services

Project #: CA19_4443_007 **City:** Spring Valley

Location: Conrad Dr N/O Campo Rd **Date:** 11/12/2019

Prepared by National Data & Surveying Services

CLASSIFICATION

Barcelona St S/O Campo Rd

Day: Tuesday
Date: 11/12/2019

City: Spring Valley
Project #: CA19_4443_008

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	55	1	0	0	0	0	0	0	0	0	0	0	56
01:00	0	34	3	0	0	0	0	0	0	0	0	0	0	37
02:00	0	19	1	0	1	0	0	0	0	0	0	0	0	21
03:00	0	13	3	0	0	0	0	0	0	0	0	0	0	16
04:00	0	30	13	0	2	0	0	0	0	0	0	0	0	45
05:00	0	101	37	0	4	0	0	0	0	0	0	0	0	142
06:00	0	211	23	0	2	0	0	0	0	0	0	0	0	236
07:00	4	477	51	2	6	2	0	1	0	0	0	0	0	543
08:00	1	368	36	0	6	1	0	2	0	0	0	0	0	414
09:00	2	261	31	0	3	0	0	2	1	0	0	0	0	300
10:00	0	247	35	0	11	0	0	0	0	0	0	0	0	293
11:00	3	340	40	4	8	2	0	1	0	0	0	0	0	398
12:00 PM	3	335	45	2	5	2	0	1	1	0	0	0	0	394
13:00	1	362	44	5	2	1	0	1	1	0	0	0	0	417
14:00	1	373	56	2	7	3	0	1	0	0	0	0	0	443
15:00	3	403	61	0	4	0	0	1	1	0	0	0	0	473
16:00	5	435	44	0	2	1	0	1	1	0	0	0	0	489
17:00	2	510	32	1	2	0	0	1	0	0	0	0	0	548
18:00	0	380	30	0	7	3	0	0	0	0	0	0	0	420
19:00	0	291	27	2	1	2	0	0	0	0	0	0	0	323
20:00	0	232	18	0	0	0	0	0	0	0	0	0	0	250
21:00	0	200	18	0	0	0	0	0	0	0	0	0	0	218
22:00	0	122	10	0	1	0	0	0	0	0	0	0	0	133
23:00	0	96	7	0	0	0	0	0	0	0	0	0	0	103
Totals	**25**	**5895**	**666**	**18**	**74**	**17**		**12**	**5**					**6712**
% of Totals	0%	88%	10%	0%	1%	0%		0%	0%					100%

AM Volumes	10	2156	274	6	43	5	0	6	1	0	0	0	0	2501
% AM	0%	32%	4%	0%	1%	0%		0%	0%					37%
AM Peak Hour	07:00	07:00	07:00	11:00	10:00	07:00		08:00	09:00					07:00
Volume	4	477	51	4	11	2		2	1					543
PM Volumes	15	3739	392	12	31	12	0	6	4	0	0	0	0	4211
% PM	0%	56%	6%	0%	0%	0%		0%	0%					63%
PM Peak Hour	16:00	17:00	15:00	13:00	14:00	14:00		12:00	12:00					17:00
Volume	5	510	61	5	7	3		1	1					548

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	957		14%	811		12%	1037		15%	3907		58%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

DAILY TOTALS	NB	SB	EB	WB	To
	3,459	3,253	0	0	6,7

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TO
00:00	5		10		0	0	15		12:00	59		49		0	0	108
00:15	13		7		0	0	20		12:15	57		44		0	0	101
00:30	5		9		0	0	14		12:30	43		46		0	0	89
00:45	4	27	3	29	0	0	7	56	12:45	57	216	39	178	0	0	96
01:00	3		5		0	0	8		13:00	51		69		0	0	120
01:15	8		8		0	0	16		13:15	55		58		0	0	113
01:30	5		2		0	0	7		13:30	49		46		0	0	95
01:45	1	17	5	20	0	0	6	37	13:45	43	198	46	219	0	0	89
02:00	3		6		0	0	9		14:00	44		56		0	0	100
02:15	2		3		0	0	5		14:15	59		54		0	0	113
02:30	4		0		0	0	4		14:30	60		51		0	0	111
02:45	2	11	1	10	0	0	3	21	14:45	56	219	63	224	0	0	119
03:00	3		0		0	0	3		15:00	59		71		0	0	130
03:15	2		3		0	0	5		15:15	50		71		0	0	121
03:30	1		1		0	0	2		15:30	52		61		0	0	113
03:45	5	11	1	5	0	0	6	16	15:45	40	201	69	272	0	0	109
04:00	5		2		0	0	7		16:00	57		68		0	0	125
04:15	7		0		0	0	7		16:15	45		77		0	0	122
04:30	8		2		0	0	10		16:30	54		61		0	0	115
04:45	16	36	5	9	0	0	21	45	16:45	51	207	76	282	0	0	127
05:00	21		6		0	0	27		17:00	49		76		0	0	125
05:15	25		9		0	0	34		17:15	43		95		0	0	138
05:30	29		5		0	0	34		17:30	66		79		0	0	145
05:45	38	113	9	29	0	0	47	142	17:45	61	219	79	329	0	0	140
06:00	44		14		0	0	58		18:00	38		88		0	0	126
06:15	42		11		0	0	53		18:15	45		56		0	0	101
06:30	44		16		0	0	60		18:30	46		55		0	0	101
06:45	42	172	23	64	0	0	65	236	18:45	42	171	50	249	0	0	92
07:00	80		26		0	0	106		19:00	39		52		0	0	91
07:15	76		38		0	0	114		19:15	35		39		0	0	74
07:30	98		50		0	0	148		19:30	41		52		0	0	93
07:45	109	363	66	180	0	0	175	543	19:45	32	147	33	176	0	0	65
08:00	79		50		0	0	129		20:00	23		35		0	0	58
08:15	63		35		0	0	98		20:15	30		46		0	0	76
08:30	64		34		0	0	98		20:30	21		41		0	0	62
08:45	60	266	29	148	0	0	89	414	20:45	23	97	31	153	0	0	54
09:00	50		35		0	0	85		21:00	25		47		0	0	72
09:15	61		23		0	0	84		21:15	25		30		0	0	55
09:30	33		30		0	0	63		21:30	13		27		0	0	40
09:45	44	188	24	112	0	0	68	300	21:45	20	83	31	135	0	0	51
10:00	53		31		0	0	84		22:00	17		28		0	0	45
10:15	41		29		0	0	70		22:15	13		23		0	0	36
10:30	46		29		0	0	75		22:30	11		15		0	0	26
10:45	41	181	23	112	0	0	64	293	22:45	15	56	11	77	0	0	26
11:00	41		27		0	0	68		23:00	16		16		0	0	32
11:15	33		59		0	0	92		23:15	11		11		0	0	22
11:30	50		49		0	0	99		23:30	10		16		0	0	26
11:45	85	209	54	189	0	0	139	398	23:45	14	51	9	52	0	0	23
TOTALS		1594		907				2501	TOTALS		1865		2346			
SPLIT %		63.7%		36.3%				37.3%	SPLIT %		44.3%		55.7%			

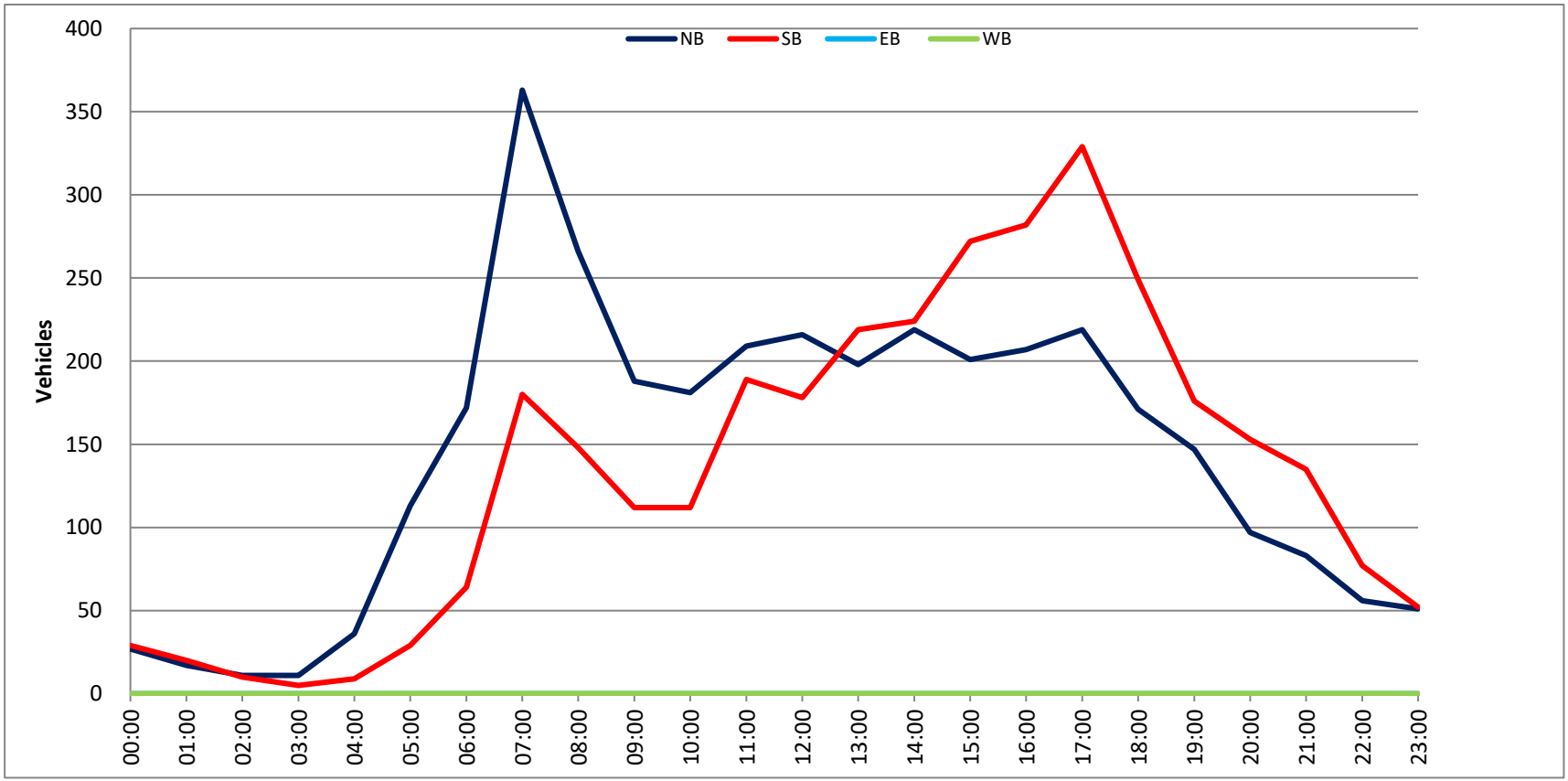
DAILY TOTALS	NB	SB	EB	WB	To
	3,459	3,253	0	0	6,7

AM Peak Hour	07:00	11:15			07:15	PM Peak Hour	14:15	17:15			
AM Pk Volume	363	211			566	PM Pk Volume	234	341			
Pk Hr Factor	0.833	0.894			0.809	Pk Hr Factor	0.975	0.897			
7 - 9 Volume	629	328	0	0	957	4 - 6 Volume	426	611	0	0	
7 - 9 Peak Hour	07:00	07:15			07:15	4 - 6 Peak Hour	17:00	17:00			
7 - 9 Pk Volume	363	204	0	0	566	4 - 6 Pk Volume	219	329	0	0	
Pk Hr Factor	0.833	0.773	0.000	0.000	0.809	Pk Hr Factor	0.830	0.866	0.000	0.000	

Prepared by National Data & Surveying Services

Project #: CA19_4443_008 **City:** Spring Valley

Location: Barcelona St S/O Campo Rd **Date:** 11/12/2019



Prepared by National Data & Surveying Services

VOLUME

Casa De Oro Blvd E/O Campo Rd & Granada Ave

Day: Tuesday
Date: 11/12/2019

City: Spring Valley
Project #: CA19_4443_009

DAILY TOTALS	NB	SB	EB	WB	Total
	1,176	1,286	0	0	2,462

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	4		0				4		12:00	26		18				44	
00:15	0		0				0		12:15	31		13				44	
00:30	2		2				4		12:30	24		19				43	
00:45	0	6	0	2			0	8	12:45	23	104	22	72			45	176
01:00	1		0				1		13:00	25		35				60	
01:15	0		0				0		13:15	22		16				38	
01:30	0		1				1		13:30	23		23				46	
01:45	0	1	0	1			0	2	13:45	26	96	14	88			40	184
02:00	0		0				0		14:00	22		23				45	
02:15	2		0				2		14:15	32		19				51	
02:30	1		1				2		14:30	16		28				44	
02:45	0	3	0	1			0	4	14:45	26	96	25	95			51	191
03:00	1		0				1		15:00	19		16				35	
03:15	1		2				3		15:15	33		23				56	
03:30	0		3				3		15:30	25		32				57	
03:45	0	2	1	6			1	8	15:45	29	106	25	96			54	202
04:00	0		1				1		16:00	33		10				43	
04:15	2		0				2		16:15	26		13				39	
04:30	1		3				4		16:30	26		30				56	
04:45	0	3	2	6			2	9	16:45	32	117	17	70			49	187
05:00	0		5				5		17:00	29		17				46	
05:15	2		7				9		17:15	18		27				45	
05:30	2		10				12		17:30	30		22				52	
05:45	4	8	9	31			13	39	17:45	25	102	25	91			50	193
06:00	3		13				16		18:00	20		19				39	
06:15	3		17				20		18:15	14		12				26	
06:30	4		13				17		18:30	20		19				39	
06:45	6	16	21	64			27	80	18:45	19	73	14	64			33	137
07:00	9		16				25		19:00	10		15				25	
07:15	13		28				41		19:15	9		12				21	
07:30	13		39				52		19:30	14		9				23	
07:45	20	55	46	129			66	184	19:45	17	50	12	48			29	98
08:00	25		41				66		20:00	11		9				20	
08:15	10		34				44		20:15	11		6				17	
08:30	19		14				33		20:30	18		9				27	
08:45	9	63	13	102			22	165	20:45	9	49	7	31			16	80
09:00	16		28				44		21:00	8		6				14	
09:15	11		23				34		21:15	9		6				15	
09:30	9		26				35		21:30	9		5				14	
09:45	12	48	21	98			33	146	21:45	6	32	3	20			9	52
10:00	11		25				36		22:00	6		3				9	
10:15	15		14				29		22:15	3		3				6	
10:30	10		23				33		22:30	4		1				5	
10:45	13	49	21	83			34	132	22:45	8	21	3	10			11	31
11:00	15		11				26		23:00	2		0				2	
11:15	14		21				35		23:15	1		1				2	
11:30	11		18				29		23:30	0		2				2	
11:45	28	68	20	70			48	138	23:45	5	8	5	8			10	16
TOTALS		322		593				915	TOTALS		854		693				1547
SPLIT %		35.2%		64.8%				37.2%	SPLIT %		55.2%		44.8%				62.8%

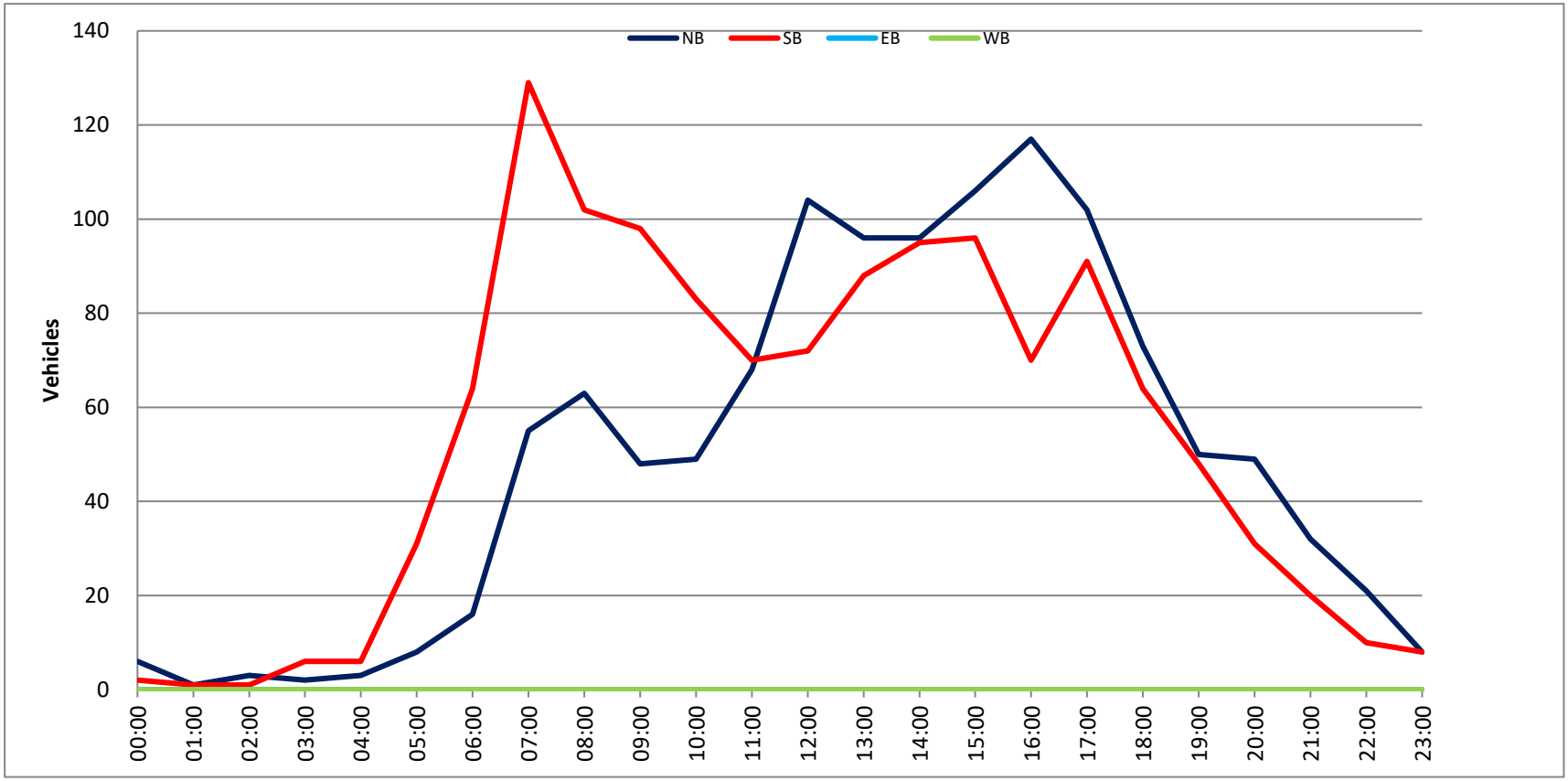
DAILY TOTALS	NB	SB	EB	WB	Total
	1,176	1,286	0	0	2,462

AM Peak Hour	11:45	07:30					07:30		PM Peak Hour	15:15	12:45					15:15		
AM Pk Volume	109	160					228		PM Pk Volume	120	96					210		
Pk Hr Factor	0.879	0.870					0.864		Pk Hr Factor	0.909	0.686					0.921		
7 - 9 Volume	118	231	0	0			349		4 - 6 Volume	219	161	0	0			380		
7 - 9 Peak Hour	07:45	07:30					07:30		4 - 6 Peak Hour	16:00	16:30					16:30		
7 - 9 Pk Volume	74	160	0	0			228		4 - 6 Pk Volume	117	91	0	0			196		
Pk Hr Factor	0.740	0.870	0.000	0.000			0.864		Pk Hr Factor	0.886	0.758	0.000	0.000			0.875		

Prepared by National Data & Surveying Services

Project #: CA19_4443_009 **City:** Spring Valley

Location: Casa De Oro Blvd E/O Campo Rd & Granada **Date:** 11/12/2019



Prepared by National Data & Surveying Services

VOLUME

Ramona Dr Bet. Madrid Way & Casa De Oro Blvd

Day: Tuesday
Date: 11/12/2019

City: Spring Valley
Project #: CA19_4443_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	599	632	1,231

AM Period	NB		SB		EB		WB		TOTAL	
00:00					0		0		0	
00:15					2		1		3	
00:30					0		0		0	
00:45					1	3	0	1	1	4
01:00					0		0		0	
01:15					0		0		0	
01:30					0		0		0	
01:45					0		0		0	
02:00					0		0		0	
02:15					0		0		0	
02:30					0		0		0	
02:45					1	1	0		1	1
03:00					0		0		0	
03:15					0		0		0	
03:30					0		0		0	
03:45					0		0		0	
04:00					0		0		0	
04:15					0		1		1	
04:30					0		0		0	
04:45					0		1	2	1	2
05:00					0		1		1	
05:15					1		4		5	
05:30					0		7		7	
05:45					2	3	4	16	6	19
06:00					3		7		10	
06:15					1		5		6	
06:30					2		3		5	
06:45					1	7	4	19	5	26
07:00					6		12		18	
07:15					19		11		30	
07:30					32		27		59	
07:45					58	115	40	90	98	205
08:00					18		69		87	
08:15					6		21		27	
08:30					6		10		16	
08:45					7	37	5	105	12	142
09:00					7		9		16	
09:15					4		12		16	
09:30					6		6		12	
09:45					4	21	6	33	10	54
10:00					5		3		8	
10:15					5		5		10	
10:30					8		3		11	
10:45					3	21	6	17	9	38
11:00					5		6		11	
11:15					5		8		13	
11:30					8		6		14	
11:45					6	24	8	28	14	52
TOTALS						232		311		**543**
SPLIT %						42.7%		57.3%		**44.1%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00					6		8		14	
12:15					7		9		16	
12:30					9		4		13	
12:45					24	46	10	31	34	77
13:00					34		33		67	
13:15					9		15		24	
13:30					12		9		21	
13:45					11	66	3	60	14	126
14:00					7		21		28	
14:15					7		14		21	
14:30					12		10		22	
14:45					11	37	13	58	24	95
15:00					9		8		17	
15:15					11		7		18	
15:30					12		10		22	
15:45					19	51	18	43	37	94
16:00					11		11		22	
16:15					10		15		25	
16:30					8		3		11	
16:45					17	46	13	42	30	88
17:00					14		15		29	
17:15					16		6		22	
17:30					8		13		21	
17:45					10	48	6	40	16	88
18:00					8		9		17	
18:15					11		2		13	
18:30					5		5		10	
18:45					2	26	6	22	8	48
19:00					5		3		8	
19:15					5		3		8	
19:30					1		3		4	
19:45					1	12	1	10	2	22
20:00					4		0		4	
20:15					3		0		3	
20:30					4		3		7	
20:45					2	13	1	4	3	17
21:00					3		1		4	
21:15					3		3		6	
21:30					1		2		3	
21:45					4	11	1	7	5	18
22:00					3		0		3	
22:15					0		3		3	
22:30					2		0		2	
22:45					1	6	0	3	1	9
23:00					0		0		0	
23:15					2		0		2	
23:30					0		1		1	
23:45					3	5	0	1	3	6
TOTALS						367		321		**688**
SPLIT %						53.3%		46.7%		**55.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	599	632	1,231

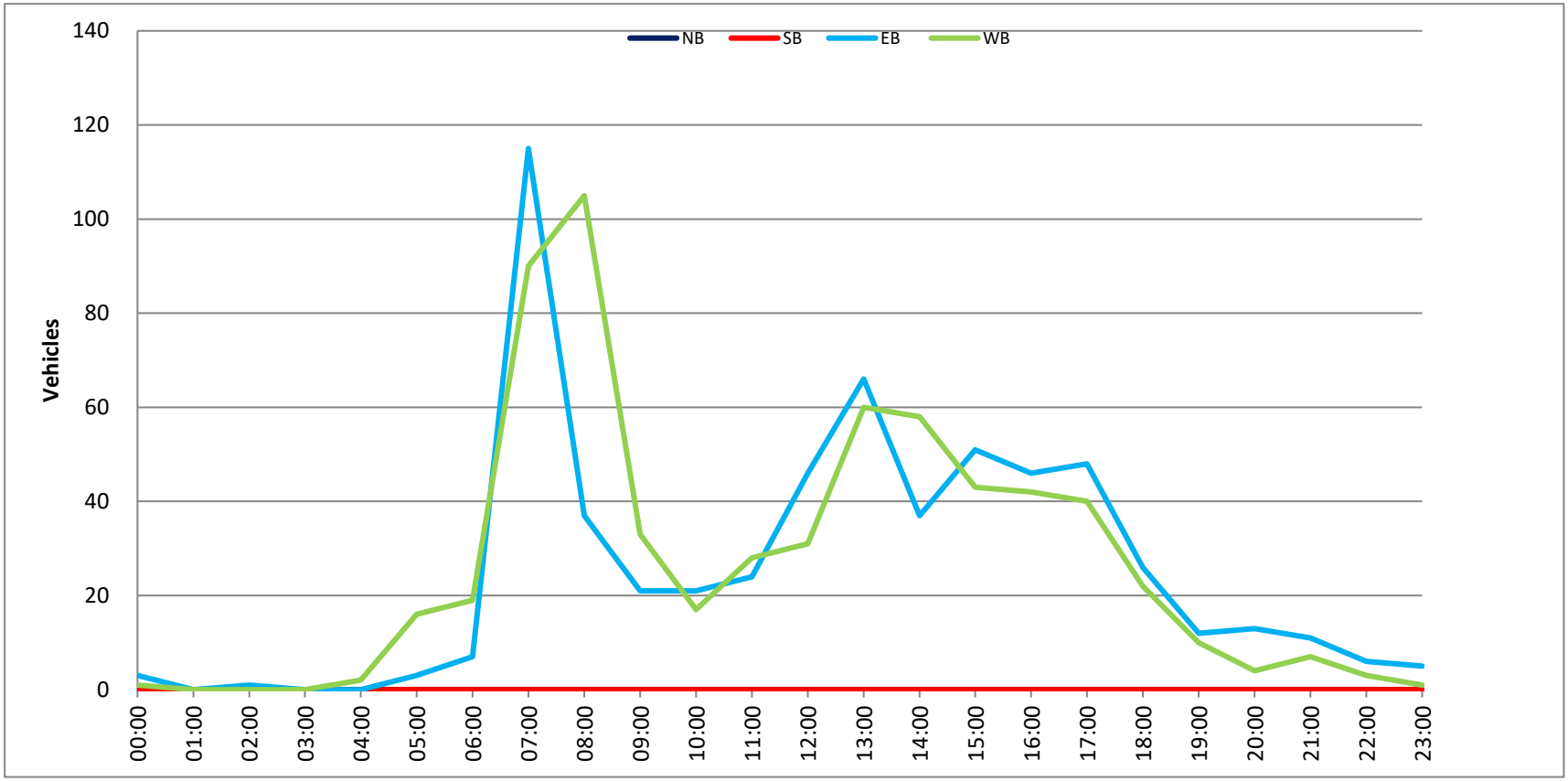
AM Peak Hour		07:15	07:30	**07:15**
AM Pk Volume		127	157	**274**
Pk Hr Factor		0.547	0.569	**0.699**
7 - 9 Volume	0 0	152	195	**347**
7 - 9 Peak Hour		07:15	07:30	**07:15**
7 - 9 Pk Volume	0 0	127	157	**274**
Pk Hr Factor	0.000 0.000	0.547	0.569	**0.699**

PM Peak Hour		12:45	12:45	**12:45**
PM Pk Volume		79	67	**146**
Pk Hr Factor		0.581	0.508	**0.545**
4 - 6 Volume	0 0	94	82	**176**
4 - 6 Peak Hour		16:30	16:45	**16:45**
4 - 6 Pk Volume	0 0	55	47	**102**
Pk Hr Factor	0.000 0.000	0.809	0.783	**0.850**

Prepared by National Data & Surveying Services

Project #: CA19_4443_010 **City:** Spring Valley

Location: Ramona Dr Bet. Madrid Way & Casa De Oro **Date:** 11/12/2019



Prepared by National Data & Surveying Services

Kenwood Dr & SR-94 EB Ramps

Peak Hour Turning Movement Count

ID: 19-04442-001
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Kenwood Dr

	Left	Thru	Right	U-Turn	
AM	0	460	55	0	891 AM
NOON	0	0	0	0	0 NOON
PM	0	462	81	0	923 PM

EASTBOUND — SR-94 EB Ramps

	AM	NOON	PM
	0	0	0
	0	0	0
	339	0	496
	1	0	4
	102	0	204

WESTBOUND — SR-94 EB Ramps

	PM	NOON	AM
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	295	0	315

NORTHBOUND — Kenwood Dr

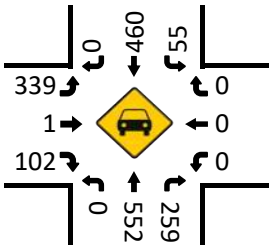
	Left	Thru	Right	U-Turn	
PM	666	0	0	427	210 PM
NOON	0	0	0	0	0 NOON
AM	562	0	0	552	259 AM

CONTROL

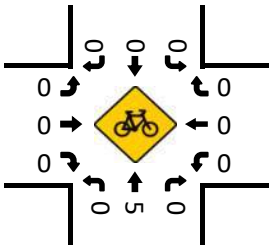
3-Way Stop (NB/SB/EB)

		AM	NOON	PM
TEV	1768	0	1884	
PHF		0.92		0.91

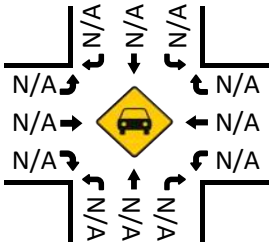
Total Vehicles (AM)



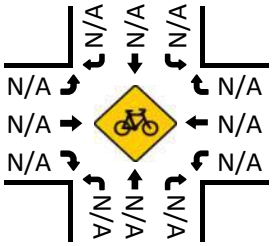
Bikes (AM)



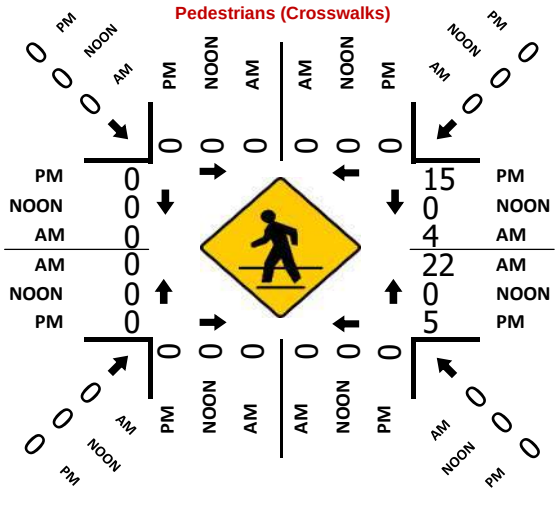
Total Vehicles (Noon)



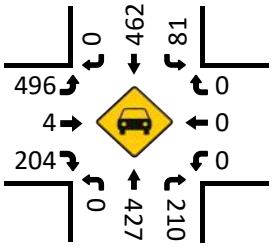
Bikes (NOON)



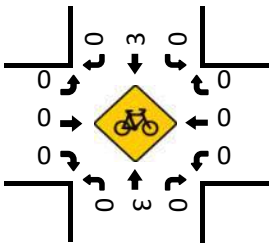
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Kenwood Dr & SR-94 WB Ramps

Peak Hour Turning Movement Count

ID: 19-04442-002
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Kenwood Dr — SOUTHBOUND

	Right	Thru	Left	U-Turn	Exit
AM	562	337	0	0	809
NOON	0	0	0	0	0
PM	421	370	0	0	788
Bikes	0	2	0	0	

SR-94 WB Ramps — EASTBOUND

	AM	NOON	PM	Bikes
Exit	832	0	619	
U-Turn	0	0	0	0
Left	0	0	0	0
Thru	0	0	0	0
Right	0	0	0	0

SR-94 WB Ramps — WESTBOUND

	PM	NOON	AM	Bikes
Right	63	0	143	1
Thru	0	0	47	0
Left	176	0	178	1
U-Turn	0	0	0	0
Exit	0	0	0	

Kenwood Dr — NORTHBOUND

	Exit	U-Turn	Left	Thru	Right
Bikes		0	1	2	0
PM	546	0	198	725	0
NOON	0	0	0	0	0
AM	515	0	223	666	0

CONTROL

3-Way Stop (NB/SB/WB)

	AM	NOON	PM
TEV	2156	0	1953
PHF	0.96		0.94

Total Vehicles (AM)

Approach	Left	Thru	Right
Southbound	0	337	562
Eastbound	0	0	0
Westbound	178	47	143
Northbound	223	666	0

Total Vehicles (Noon)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Total Vehicles (PM)

Approach	Left	Thru	Right
Southbound	0	370	421
Eastbound	0	0	0
Westbound	176	0	63
Northbound	198	725	0

Bikes (AM)

Approach	Left	Thru	Right
Southbound	0	0	0
Eastbound	0	0	0
Westbound	0	0	0
Northbound	0	5	0

Bikes (NOON)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Bikes (PM)

Approach	Left	Thru	Right
Southbound	0	4	0
Eastbound	0	0	0
Westbound	0	0	0
Northbound	0	3	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg, west half	0	0	0
North leg, east half	0	0	0
West leg, north half	0	0	0
West leg, south half	0	0	0
East leg, north half	5	0	13
East leg, south half	21	0	5
South leg, west half	0	0	0
South leg, east half	0	0	0
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

Prepared by National Data & Surveying Services

Kenwood Dr & Kenora Dr

Peak Hour Turning Movement Count

ID: 19-04442-003
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Kenwood Dr – SOUTHBOUND

	U-turn	Left	Through	Right	Departing (northbound side)
AM	0	6	797	0	764
NOON	0	0	0	0	0
PM	0	18	660	0	709
Bikes	0	0	2	0	

(Printed left to right: 0 / 797 / 6 / 0, with red bike counts 0 / 2 / 0 / 0.)

Kenwood Dr – NORTHBOUND

	U-turn	Left	Through	Right	Departing (southbound side)
PM	0	0	673	113	789
NOON	0	0	0	0	0
AM	0	0	731	66	916
Bikes	0	0	2	0	

Kenora Dr – EASTBOUND

	AM	NOON	PM	Bikes
Departing (westbound)	0	0	0	
U-turn	0	0	0	0
Left	0	0	0	0
Through	0	0	0	0
Right	0	0	0	0

Kenora Dr – WESTBOUND

	PM	NOON	AM	Bikes
Right	36	0	33	0
Through	0	0	0	1
Left	129	0	119	0
U-turn	0	0	0	0
Departing (eastbound)	131	0	72	

CONTROL

1-Way Stop (WB)

	AM	NOON	PM
TEV	1752	0	1629
PHF	0.92		0.99

Total Vehicles (AM)

Approach	U-turn	Left	Through	Right
Southbound	0	6	797	0
Northbound	0	0	731	66
Eastbound		0	0	0
Westbound		119	0	33

Total Vehicles (Noon)

All movements: N/A

Total Vehicles (PM)

Approach	U-turn	Left	Through	Right
Southbound	0	18	660	0
Northbound	0	0	673	113
Eastbound		0	0	0
Westbound		129	0	36

Bikes (AM)

Approach	U-turn	Left	Through	Right
Southbound	0	0	0	
Northbound	0	0		2
Eastbound		0	0	0
Westbound		0	0	0

(Printed: SB 0 / 0 / 0; NB 0 / 0 / 2; EB 0 / 0 / 0; WB 0 / 0 / 0.)

Bikes (NOON)

All movements: N/A

Bikes (PM)

Approach	Values as printed
Southbound	0 / 0 / 0
Northbound	0 / 0 / 3
Eastbound	0 / 0 / 0
Westbound	0 / 0 / 4

Pedestrians (Crosswalks)

Crosswalk		AM	NOON	PM
North leg	westbound	0	0	0
North leg	eastbound	1	0	0
South leg	eastbound	0	0	0
South leg	westbound	0	0	0
West leg	southbound	0	0	0
West leg	northbound	0	0	0
East leg	southbound	1	0	3
East leg	northbound	5	0	2
NW diagonal		0	0	0
NE diagonal		0	0	0
SW diagonal		0	0	0
SE diagonal		0	0	0

Prepared by National Data & Surveying Services

Kenwood Dr & Campo Rd

Peak Hour Turning Movement Count

ID: 19-04442-004
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS		COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

Kenwood Dr — SOUTHBOUND

	Right	Thru	Left	U-Turn	Departing (northbound out)
AM	0	0	0	1	4
NOON	0	0	0	0	0
PM	0	0	0	2	3
Bikes/Other	0	0	0	0	

Campo Rd — EASTBOUND

	AM	NOON	PM	
Departing (westbound out)	722	0	294	
U-Turn	0	0	0	0
Left	0	0	0	0
Thru	182	0	349	1.5
Right	74	0	108	0.5

Campo Rd — WESTBOUND

		PM	NOON	AM
Right	0	1	0	1
Thru	1	191	0	517
Left	2	553	0	736
U-Turn	0	0	0	0
Departing (eastbound out)		961	0	744

Kenwood Dr — NORTHBOUND

	Departing (southbound out)	U-Turn	Left	Thru	Right
		0	1	0	2
PM	661	0	103	0	612
NOON	0	0	0	0	0
AM	810	0	205	2	562

CONTROL

Signalized

	AM	NOON	PM
TEV	2280	0	1919
PHF	0.96		0.99

Total Vehicles (AM)

Approach	U-Turn	Left	Thru	Right
Southbound	0	0	0	0
Eastbound		0	182	74
Westbound		736	517	1
Northbound		205	2	562

Total Vehicles (Noon)

All movements: N/A

Total Vehicles (PM)

Approach	U-Turn	Left	Thru	Right
Southbound	0	0	0	0
Eastbound		0	349	108
Westbound		553	191	1
Northbound		103	0	612

Bikes (AM)

Approach	Left	Thru	Right
Southbound	0	0	0
Eastbound	0	0	0
Westbound	0	1	0
Northbound	0	0	0

Bikes (NOON)

All movements: N/A

Bikes (PM)

Approach	Left	Thru	Right
Southbound	0	0	0
Eastbound	0	0	0
Westbound	0	1	0
Northbound	0	0	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (west half)	2	0	0
North leg (east half)	2	0	6
West leg (north half)	1	0	1
West leg (south half)	2	0	0
East leg (north half)	0	0	0
East leg (south half)	0	0	0
South leg (west half)	8	0	5
South leg (east half)	1	0	3
NW corner diagonal	0	0	0
NE corner diagonal	0	0	0
SW corner diagonal	0	0	0
SE corner diagonal	0	0	0

Prepared by National Data & Surveying Services

Conrad Dr & Campo Rd

Peak Hour Turning Movement Count

ID: 19-04442-005
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Conrad Dr

AM	378	10	146	0	337	AM
NOON	0	0	0	0	0	NOON
PM	157	13	79	0	187	PM
	1	0.5	0.5	0		

EASTBOUND — Campo Rd

AM	NOON	PM	
1277	0	741	
0	0	0	0
225	0	135	1
457	0	819	2
10	0	15	0
AM	NOON	PM	

WESTBOUND — Campo Rd

PM	NOON	AM	
52	0	111	0
584	0	898	2
14	0	10	1
0	0	0	0
910	0	605	
PM	NOON	AM	

NORTHBOUND — Conrad Dr

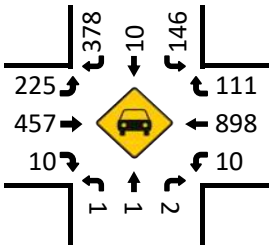
PM	42	0	0	0	12	PM
NOON	0	0	0	0	0	NOON
AM	30	0	1	1	2	AM
		0	0	0	0	

CONTROL

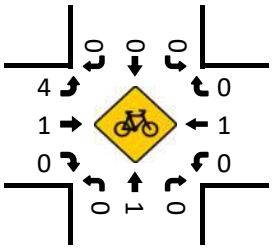
Signalized

TEV	2249 AM	0 NOON	1880 PM
PHF	0.97		0.97

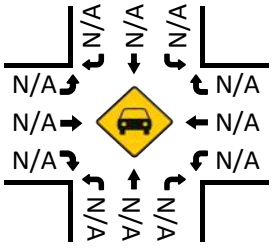
Total Vehicles (AM)



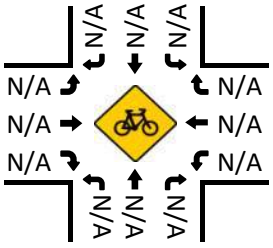
Bikes (AM)



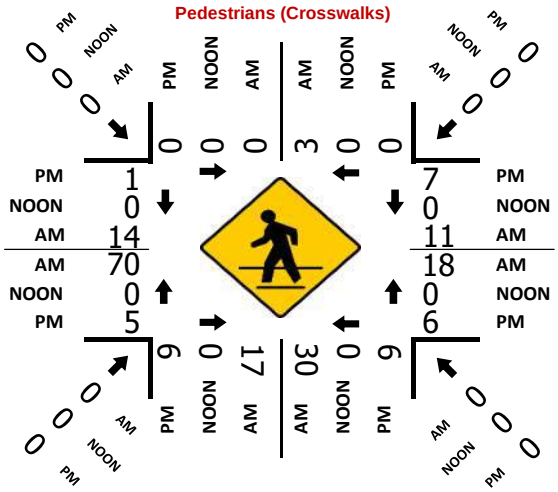
Total Vehicles (Noon)



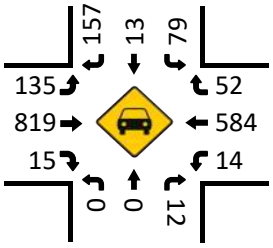
Bikes (NOON)



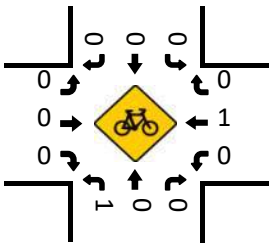
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Bonita St & Campo Rd

Peak Hour Turning Movement Count

ID: 19-04442-006
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Bonita St

	L	T	R	U	Total	
AM	60	12	45	0	156	AM
NOON	0	0	0	0	0	NOON
PM	40	18	33	0	75	PM

EASTBOUND — Campo Rd

AM	NOON	PM	
1106	0	607	⇦
0	0	0	0
44	0	41	1
450	0	675	2
35	0	55	0
AM	NOON	PM	

WESTBOUND — Campo Rd

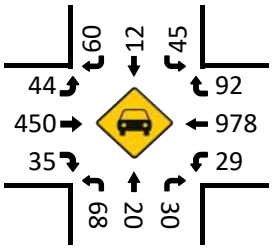
PM	NOON	AM	
19	0	92	0
493	0	978	2
23	0	29	1
0	0	0	0
762	0	525	⇨
PM	NOON	AM	

NORTHBOUND — Bonita St

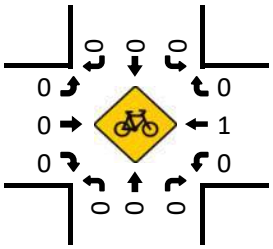
	L	T	R	U	Total	
PM	96	0	74	15	54	PM
NOON	0	0	0	0	0	NOON
AM	76	0	68	20	30	AM

CONTROL			
Signalized			
TEV	1863	0	1540
	AM	NOON	PM
PHF	0.87		0.94

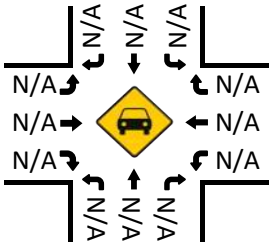
Total Vehicles (AM)



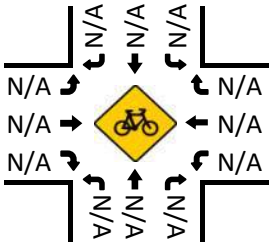
Bikes (AM)



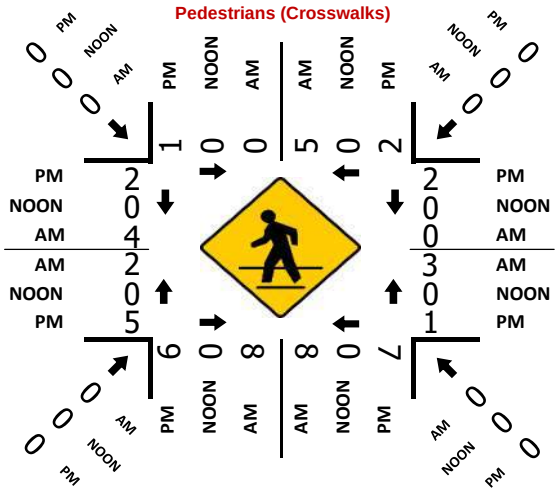
Total Vehicles (Noon)



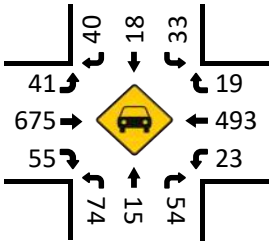
Bikes (NOON)



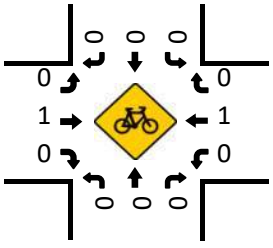
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Barcelona St & Campo Rd

Peak Hour Turning Movement Count

ID: 19-04442-007
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Barcelona St

	Left	Thru	Right	U-Turn	Total	
AM	18	12	20	0	81	AM
NOON	0	0	0	0	0	NOON
PM	22	26	22	0	39	PM

EASTBOUND — Campo Rd

	AM	NOON	PM
Thru	1100	0	532
Left	0	0	0
Right	13	0	10
Thru	340	0	494
Right	158	0	236

WESTBOUND — Campo Rd

	PM	NOON	AM
Left	20	0	35
Thru	363	0	793
Left	57	0	30
U-Turn	0	0	0
Thru	579	0	416

NORTHBOUND — Barcelona St

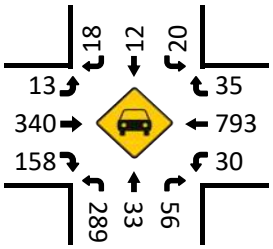
	Thru	Left	Thru	Right	U-Turn	Total	
PM	319	0	147	9	63	PM	
NOON	0	0	0	0	0	NOON	
AM	200	0	289	33	56	AM	

CONTROL

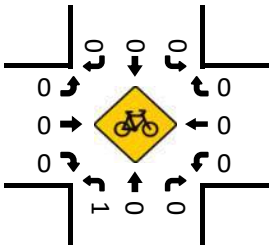
Signalized

TEV	1797	0	1469
	AM	NOON	PM
PHF	0.89		0.97

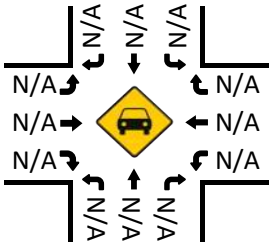
Total Vehicles (AM)



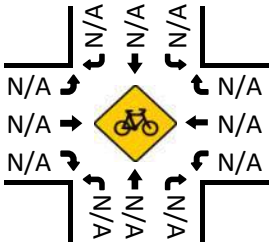
Bikes (AM)



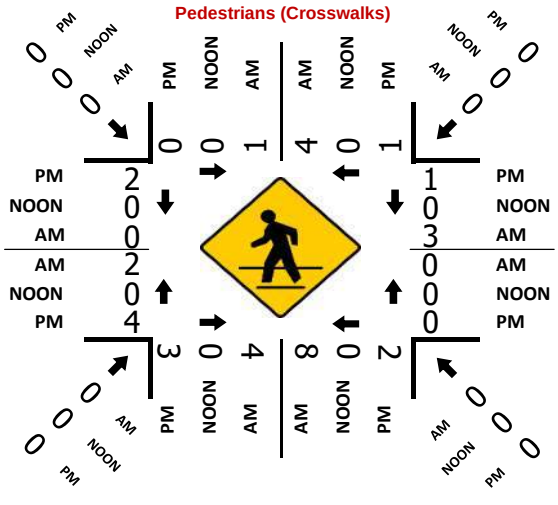
Total Vehicles (Noon)



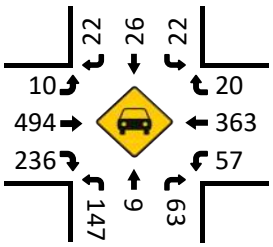
Bikes (NOON)



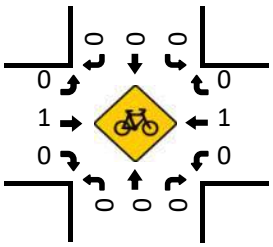
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Cordoba Ave & Campo Rd

Peak Hour Turning Movement Count

ID: 19-04442-008
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Cordoba Ave — SOUTHBOUND

AM	35	5	44	0	88	AM
NOON	0	0	0	0	0	NOON
PM	49	11	33	0	92	PM

Campo Rd — EASTBOUND

AM	NOON	PM	
838	0	423	
0	0	0	0
32	0	60	0
400	0	527	2
17	0	17	0
AM	NOON	PM	

Campo Rd — WESTBOUND

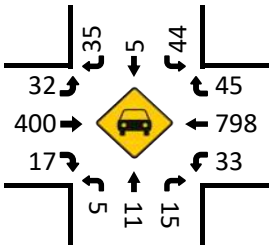
PM	NOON	AM	
28	0	45	0
365	0	798	2
27	0	33	0
0	0	0	0
580	0	459	
PM	NOON	AM	

Cordoba Ave — NORTHBOUND

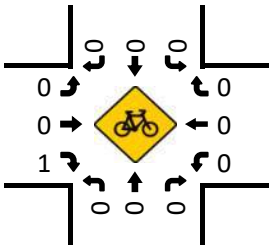
PM	56	1	9	4	20	PM
NOON	0	0	0	0	0	NOON
AM	55	0	5	11	15	AM

CONTROL			
2-Way Stop (NB/SB)			
TEV	1440	0	1151
	AM	NOON	PM
PHF	0.84		0.95

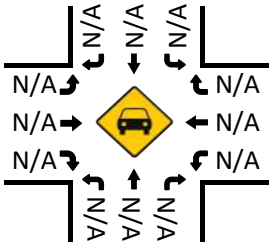
Total Vehicles (AM)



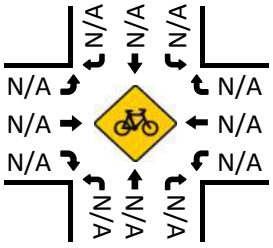
Bikes (AM)



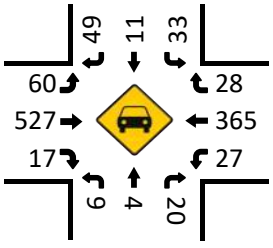
Total Vehicles (Noon)



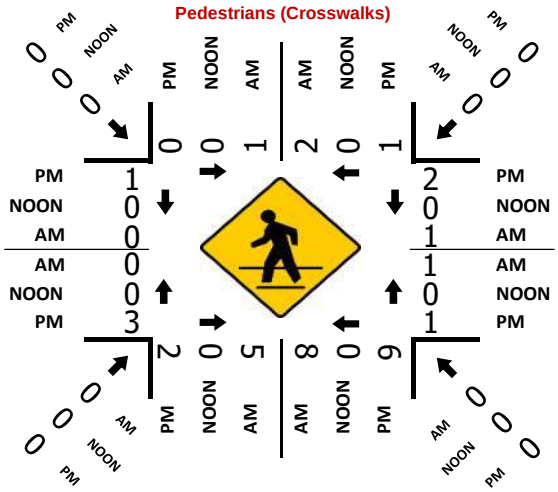
Bikes (NOON)



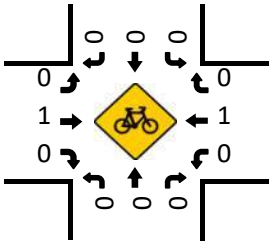
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



Prepared by National Data & Surveying Services

Granada Ave/Casa De Oro Blvd & Campo Rd

Peak Hour Turning Movement Count

ID: 19-04442-009
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Granada Ave/Casa De Oro Blvd — SOUTHBOUND

AM	15	3	40	0	44	AM
NOON	0	0	0	0	0	NOON
PM	9	3	28	0	15	PM

Campo Rd — EASTBOUND

AM	NOON	PM		
742	0	334		
0	0	0	0	
17	0	3	1	
345	0	474	2	
9	0	9	0	
AM	NOON	PM		

Campo Rd — WESTBOUND

PM	NOON	AM	
11	0	26	0.5
312	0	704	1.5
19	0	9	1
0	0	0	0
551	0	472	
PM	NOON	AM	

Granada Ave/Casa De Oro Blvd — NORTHBOUND

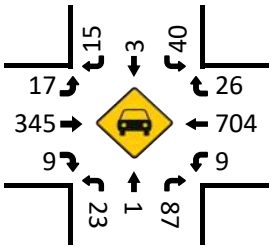
PM	31	0	13	1	49	PM
NOON	0	0	0	0	0	NOON
AM	21	0	23	1	87	AM

	0	1	0	0
	0	0	0.5	0.5

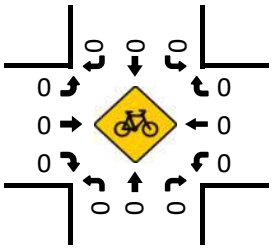
CONTROL: Signalized

TEV	1279	0	931
	AM	NOON	PM
PHF	0.83		0.93

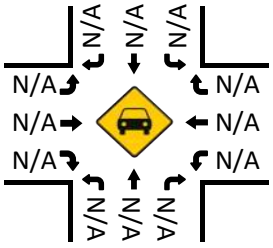
Total Vehicles (AM)



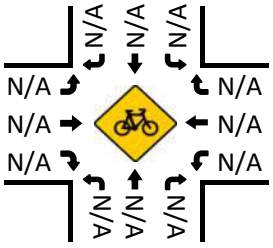
Bikes (AM)



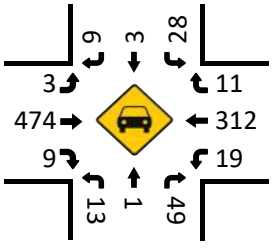
Total Vehicles (Noon)



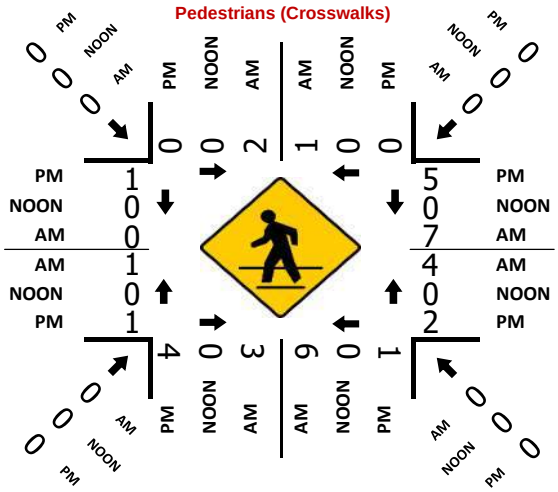
Bikes (NOON)



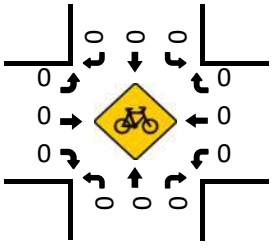
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Granada Ave/Casa De Oro Blvd & Campo Rd
City: Spring Valley
Control: Signalized

Project ID: 19-04442-009
Date: 11/12/2019

Total

NS/EW Streets:	Granada Ave/Casa De Oro Blvd					Granada Ave/Casa De Oro Blvd					Campo Rd					Campo Rd									
AM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					SOUTHBOUND2				
	0	0.5	0.5	0	0	0	1	0	0	0	1	2	0	0	0	1	1.5	0.5	0	0	0	0	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	S2U	S2L2	S2T2	S2R2	S2U2	TOTAL
7:00 AM	8	0	19	0	0	6	0	1	0	0	1	52	3	0	5	1	109	7	0	9	0	15	0	10	1	247
7:15 AM	5	0	16	0	2	7	0	2	0	0	2	62	1	0	15	1	136	3	0	10	0	8	0	21	0	291
7:30 AM	7	0	28	0	8	9	0	2	0	0	4	53	5	0	19	2	116	5	0	8	0	9	2	29	5	311
7:45 AM	3	1	30	0	10	5	1	2	0	0	3	110	3	0	28	2	143	4	0	21	0	16	6	32	3	423
8:00 AM	10	0	13	0	5	15	1	6	0	0	7	84	1	0	14	2	230	10	0	17	0	13	7	56	2	493
8:15 AM	3	0	16	0	2	11	1	5	0	0	3	98	0	0	5	3	215	7	0	5	0	11	2	23	4	414
8:30 AM	4	0	12	0	2	12	0	3	0	1	0	104	1	0	8	1	114	2	0	7	0	8	1	12	1	293
8:45 AM	8	0	15	0	0	4	0	2	0	0	0	73	2	0	7	1	51	2	0	9	0	6	0	11	0	191
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	S2U	S2L2	S2T2	S2R2	S2U2	TOTAL
TOTAL VOLUMES :	48	1	149	0	29	69	3	23	0	1	20	636	16	0	101	13	1114	40	0	86	0	86	18	194	16	2663
APPROACH %'s :	21.15%	0.44%	65.64%	0.00%	12.78%	71.88%	3.13%	23.96%	0.00%	1.04%	2.59%	82.28%	2.07%	0.00%	13.07%	1.04%	88.91%	3.19%	0.00%	6.86%	0.00%	27.39%	5.73%	61.78%	5.10%	
PEAK HR :	07:30 AM - 08:30 AM																									TOTAL
PEAK HR VOL :	23	1	87	0	25	40	3	15	0	0	17	345	9	0	66	9	704	26	0	51	0	49	17	140	14	1641
PEAK HR FACTOR :	0.575	0.250	0.725	0.000	0.625	0.667	0.750	0.625	0.000	0.000	0.607	0.784	0.450	0.000	0.589	0.750	0.765	0.650	0.000	0.607	0.000	0.766	0.607	0.625	0.700	
			0.773					0.659					0.759					0.763					0.705			0.832

PM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					SOUTHBOUND2				
	0	0.5	0.5	0	0	0	1	0	0	0	1	2	0	0	0	1	1.5	0.5	0	0	0	0	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	S2U	S2L2	S2T2	S2R2	S2U2	TOTAL
4:00 PM	1	1	13	0	4	13	0	1	0	0	2	97	7	0	19	3	95	10	0	10	0	8	2	10	1	297
4:15 PM	3	2	17	0	2	4	0	2	0	1	1	106	2	0	19	1	77	2	0	14	0	6	2	15	5	281
4:30 PM	5	1	9	0	0	8	0	7	0	1	2	111	7	0	21	4	75	1	0	6	0	8	3	12	1	282
4:45 PM	5	0	13	0	3	12	2	3	0	0	0	128	2	0	21	5	84	1	0	15	0	8	0	17	1	320
5:00 PM	3	0	16	0	3	8	1	1	0	1	0	124	2	0	22	8	73	1	0	7	0	11	1	20	1	303
5:15 PM	3	0	7	0	0	8	0	2	0	0	2	100	2	0	21	4	73	8	0	9	0	6	3	16	1	265
5:30 PM	2	1	13	0	1	0	0	3	0	0	1	122	3	0	19	2	82	1	0	13	0	14	1	25	1	304
5:45 PM	5	1	9	0	5	1	1	1	0	0	0	101	4	0	13	2	54	1	0	12	0	9	0	22	1	242
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	S2U	S2L2	S2T2	S2R2	S2U2	TOTAL
TOTAL VOLUMES :	27	6	97	0	18	54	4	20	0	3	8	889	29	0	155	29	613	25	0	86	0	70	12	137	12	2294
APPROACH %'s :	18.24%	4.05%	65.54%	0.00%	12.16%	66.67%	4.94%	24.69%	0.00%	3.70%	0.74%	82.24%	2.68%	0.00%	14.34%	3.85%	81.41%	3.32%	0.00%	11.42%	0.00%	30.30%	5.19%	59.31%	5.19%	
PEAK HR :	04:45 PM - 05:45 PM																									TOTAL
PEAK HR VOL :	13	1	49	0	7	28	3	9	0	1	3	474	9	0	83	19	312	11	0	44	0	39	5	78	4	1192
PEAK HR FACTOR :	0.650	0.250	0.766	0.000	0.583	0.583	0.375	0.750	0.000	0.250	0.375	0.926	0.750	0.000	0.943	0.594	0.929	0.344	0.000	0.733	0.000	0.696	0.417	0.780	1.000	
			0.795					0.603					0.942					0.919					0.768			0.931

Prepared by National Data & Surveying Services

Campo Rd & SR-94 WB On-Ramps/Agua Dulce Blvd

Peak Hour Turning Movement Count

ID: 19-04442-010
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

Campo Rd — SOUTHBOUND

AM	189	322	16	2	817	AM
NOON	0	0	0	0	0	NOON
PM	126	443	8	2	430	PM

SR-94 WB On-Ramps/Agua Dulce — EASTBOUND

AM	NOON	PM		
846	0	708	⇦	
0	0	0	↶	0
0	0	0	↱	0
0	0	0	→	0
0	0	0	↷	0
AM	NOON	PM		

SR-94 WB On-Ramps/Agua Dulce — WESTBOUND

PM	NOON	AM		
155	0	289	↶	0
63	0	162	←	1
201	0	194	↰	0
0	0	0	↩	0
82	0	199	⇨	
PM	NOON	AM		

Campo Rd — NORTHBOUND

PM	644	0	519	273	74	PM
NOON	0	0	0	0	0	NOON
AM	517	1	495	526	183	AM

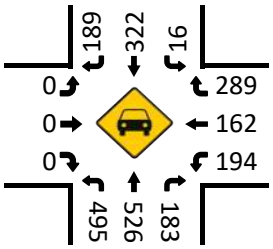
↶	↰	↑	↱	
0	1	2	0	

CONTROL

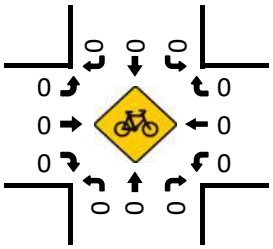
Signalized

TEV	2379	0	1864
	AM	NOON	PM
PHF	0.92		0.94

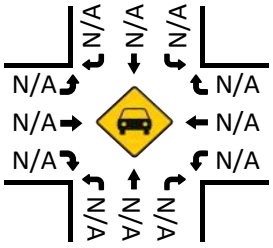
Total Vehicles (AM)



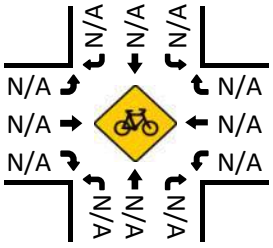
Bikes (AM)



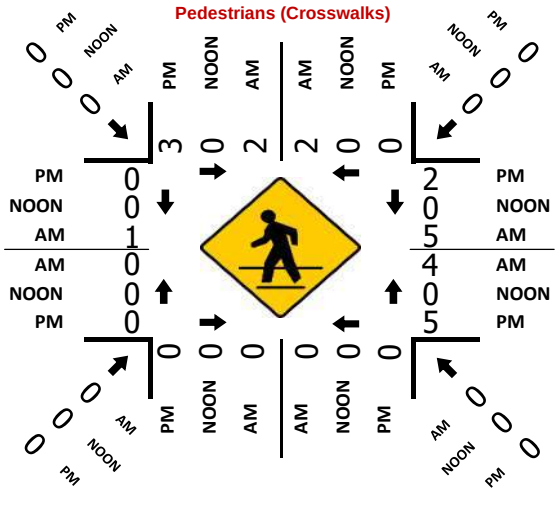
Total Vehicles (Noon)



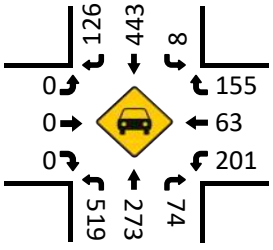
Bikes (NOON)



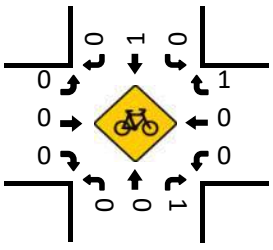
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Campo Rd & SR-94 EB Ramps

Peak Hour Turning Movement Count

ID: 19-04442-011
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Campo Rd — SOUTHBOUND

AM	0	282	180	0	1320	AM
NOON	0	0	0	0	0	NOON
PM	0	456	189	0	861	PM

EASTBOUND (SR-94 EB Ramps)

AM	NOON	PM		
0	0	0		
0	0	0	0	
196	0	139	0.5	
5	0	1	0.5	
571	0	800	1	
AM	NOON	PM		

WESTBOUND (SR-94 EB Ramps)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
398	0	425	
PM	NOON	AM	

CONTROL

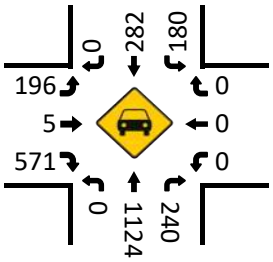
Signalized

TEV	2598	0	2515
	AM	NOON	PM
PHF	0.92		0.95

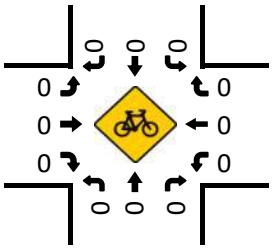
NORTHBOUND — Campo Rd

PM	1256	0	0	722	208	PM
NOON	0	0	0	0	0	NOON
AM	853	0	0	1124	240	AM

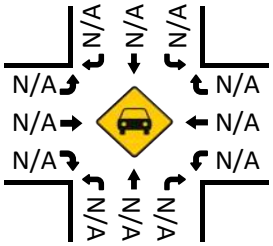
Total Vehicles (AM)



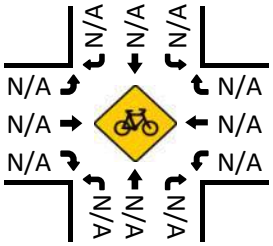
Bikes (AM)



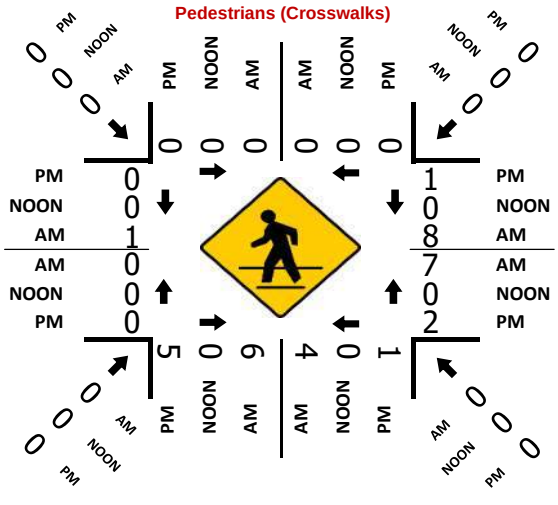
Total Vehicles (Noon)



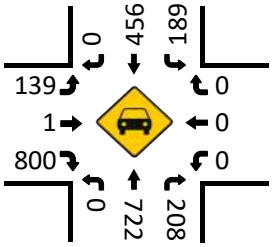
Bikes (NOON)



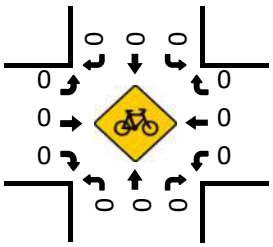
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

SR-94 WB Off-Ramps & Agua Dulce Blvd

Peak Hour Turning Movement Count

ID: 19-04442-012
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

SR-94 WB Off-Ramps — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND — Agua Dulce Blvd

AM	NOON	PM	
648	0	423	⇦
0	0	0	↶ 0
0	0	0	↱ 0
202	0	81	→ 1
0	0	0	↷ 0
AM	NOON	PM	

WESTBOUND — Agua Dulce Blvd

PM	NOON	AM	
0	0	0	0 ↶
107	0	334	1 ←
0	0	0	0 ↰
0	0	0	0 ↷
95	0	262	⇨
PM	NOON	AM	

CONTROL

1-Way Stop (NB)

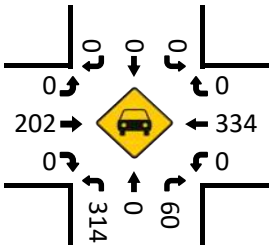
TEV	910 AM	0 NOON	518 PM
PHF	0.87		0.83

NORTHBOUND — SR-94 WB Off-Ramps

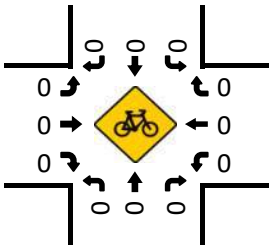
PM	0	0	316	0	14	PM
NOON	0	0	0	0	0	NOON
AM	0	0	314	0	60	AM

0 0 0 0 | 0 1 0 1

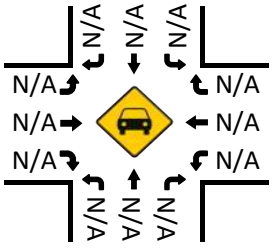
Total Vehicles (AM)



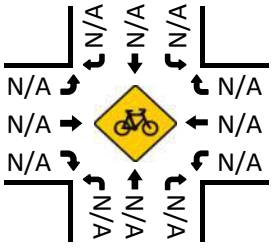
Bikes (AM)



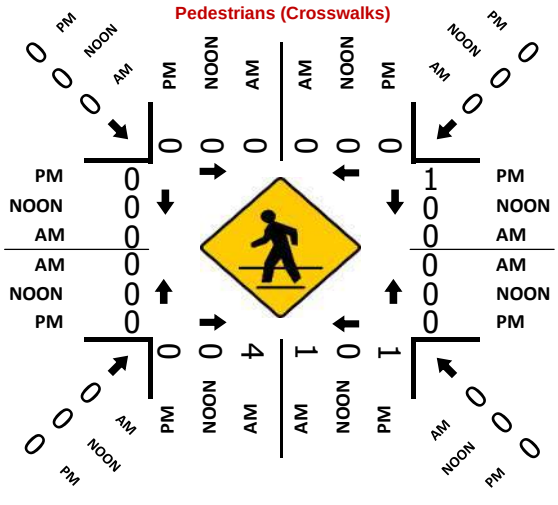
Total Vehicles (Noon)



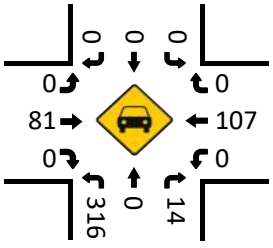
Bikes (NOON)



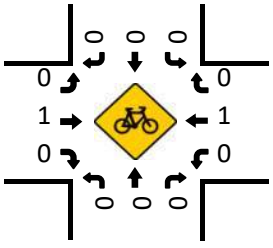
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Michael Baker
INTERNATIONAL

Attachment C:
Parking Survey Data

Prepared by National Data & Surveying Services

Parking Study

Location: Spring Valley Parking- On Street
City: Spring Valley

Date: 12/13/2019
Day: Friday

Segment	Street	From	To	Curb	Space	Restrictions	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	Note
001 S	San Juan St	Lot 40	Conrad St	Regular	9	Unrestricted	6	8	8	7	8	8	7	
001N	San Juan St	School DWY	Bonita St	Regular	7	Unrestricted	3	5	5	4	4	4	3	
002N	Dolores St	Cordoba Ave	Barcelona St	Regular	10	Unrestricted	9	9	10	10	10	9	9	
002S	Dolores St	Barcelona St	Cordoba Ave	Regular	10	Unrestricted	3	3	7	8	9	7	8	
003N	Dolores St	Granda Ave	Cordoba Ave	Regular	8	Unrestricted	4	4	4	4	5	5	6	
003S	Dolores St	Cordoba Ave	Granda Ave	Regular	8	Unrestricted	4	4	4	4	4	4	4	
004E	Conrad Dr	Campo Rd	San Juan Rd	Regular	7	Unrestricted	4	5	5	4	5	5	5	
004W	Conrad Dr	San Juan St	Campo Rd	Regular	6	Unrestricted	2	4	4	4	4	3	2	
005E	Bonita St	Campo Rd	Bonita St	Regular	7	Unrestricted	3	3	3	4	5	5	4	
005W	Bonita St	San Juan St	Campo Rd	Regular	10	Unrestricted	3	5	5	4	3	3	4	
006E	Bonita St	Dolores St	Campo Rd	Regular	5	Unrestricted	4	5*	5	5*	5*	5*	4	*One vehicle parked illegally in front of driveway (Vehicle not included in occupancy)
006W	Bonita St	Campo Rd	Dolores St	Regular	8	Unrestricted	6	6	6	5	5	5	5	
007E	Barcelona St	Campo Rd	San Juan St	Regular	7	Unrestricted	6	7	6	4	4	4	3	
007W	Barcelona St	San Juan St	Campo Rd	Regular	7	Unrestricted	3	4	4	3	3	3	4	
008 E	Barcelona St	Dolores St	Campo Rd	Regular	5	Unrestricted	5	5	4	3	3	4	4	
008 W	Barcelona St	Campo Rd	Dolores St	Regular	6	Unrestricted	6	6	5	5	5	5	5	
009E	Cordoba Ave	Campo Rd	San Juan St	Regular	8	Unrestricted	1	1	2	2	2	2	1	
009W	Cordoba Ave	San Juan St	Campo Rd	Regular	5	Unrestricted	0	0	0	0	1	1	0	
010E	Cordoba Ave	Dolores St	Campo Rd	Regular	6	Unrestricted	6	6	5	4	4	5	3	
010W	Cordoba Ave	Campo Rd	Dolores St	Regular	8	Unrestricted	4	4	3	4	3	4	2	
011E	Granda Ave	Campo Rd	San Juan St	Regular	8	Unrestricted	6	6	7	8	8	7	6	
011W	Granda Ave	San Juan St	Campo Rd	Regular	5	Unrestricted	3	3	4	4	2	2	2	
012E	Granda Ave	Dolores St	Campo Rd	Regular	8	Unrestricted	1	1	1	0	0	1	0	
012W	Granda Ave	Campo Rd	Dolores St	Regular	7	Unrestricted	0	0	1	0	0	0	0	

Prepared by National Data & Surveying Services

Parking Study

Location: Spring Valley Parking- Off Street
City: Spring Valley

Date: 12/13/2019
Day: Friday

Lot	Restriction	Space	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	Notes
13	Regular	11	3	2	2	4	4	3	5	
14	Regular	11	3	4	2	4	4	4	5	
15	Regular	103	20	25	35	26	27	17	21	
	HC	4	0	0	1	1	0	0	0	
	HC Van	2	0	0	1	1	0	0	0	
16	Regular	24	3	3	1	2	4	4	6	
	HC Van	1	0	0	0	0	0	0	0	
17	Regular	9	4	6	8	8	5	9	6	
	HC	1	0	1	1	0	0	0	0	
	Round Table	8	2	3	6	6	3	4	4	
	Customer Only	2	1	1	2	2	2	1	1	
	Patient/Customer	5	5	3	3	5	5	5	5	
18	Regular	27	14	14	14	13	11	6	5	
	HC	1	0	0	0	0	0	0	0	
	Reserved for Pastor	1	0	0	1	1	0	0	0	
19	Regular	34	19	22	19	21	19	25	23	
	HC	1	0	0	0	0	0	0	0	
	HC Van	1	0	0	0	0	0	0	0	
20	Regular	15	10	10	8	5	7	9	4	
	HC Van	1	1	0	0	0	0	0	0	
21	Regular	33	9	7	16	6	7	7	8	
	HC	1	0	0	0	0	0	0	0	
	HC Van	1	0	1	0	0	0	0	1	
22	Regular	10	1	1	2	1	1	1	0	
	HC Van	1	0	0	0	0	0	0	0	
23	Regular	2	1	2	1	0	1	2	1	
	HC Van	1	0	0	0	0	0	0	0	
24	Regular	69	15	19	22	22	28	30	28	
	HC	2	0	1	0	0	1	0	0	
	HC Van	2	0	1	0	0	0	1	1	
25	Regular	117	32	36	31	45	36	43	43	
	HC	3	0	0	1	1	0	1	0	
	HC Van	3	0	1	0	0	0	0	1	
26	Regular	5	0	0	0	0	0	0	0	
27	Unmarked Spaces		0	0	0	1	1	1	1	Unmarked inventory (Vehicles using vaccums)
28	Regular	49	23	24	24	24	24	22	21	
	HC	1	0	0	0	0	0	0	0	
	HC Van	1	0	0	0	0	0	0	0	
29	Regular	16	14	15	15	16	14	15	13	
30	Regular	54	5	6	6	6	6	5	5	
31	Regular	89	40	48	45	38	26	23	27	
	HC	8	1	2	3	4	3	3	2	
	Veteran Parking	1	0	1	0	0	1	1	0	
	Family Parking	1	1	0	0	1	1	1	1	
	15 Min (Green)	10	2	1	3	2	4	3	3	
32	Regular	10	2	3	4	4	5	5	4	
	HC Van	1	0	0	0	0	0	0	0	
33	Regular	130	43	55	68	71	85	75	61	
	HC	3	0	0	0	2	3	2	1	
	HC Van	1	0	0	0	1	1	0	0	
34	Regular	20	10	11	11	10	10	10	8	
35	Regular	59	21	27	31	33	35	32	24	
	HC	5	1	2	2	3	3	2	2	
	HC Van	1	0	1	1	0	0	0	0	
36	Regular	109	47	58	59	62	64	61	53	
	HC	1	0	0	1	0	0	0	0	
	HC Van	1	0	0	0	0	0	0	0	
37	Regular	4	1	2	2	1	2	2	1	
	HC Van	1	0	0	0	0	0	0	0	
38	Regular	2	2	1	1	2	2	2	1	
	Unmarked Spaces		3	4	4	4	5	4	4	
39	Regular	35	6	8	10	12	14	15	13	
	HC	1	0	0	1	0	0	0	0	
	HC Van	1	0	0	0	0	0	0	0	
40	Regular	50	7	7	7	6	7	7	6	
41	Regular	118	36	45	49	51	42	38	39	
	HC	7	0	0	0	1	1	2	1	
	20 Min (Green)	45	16	23	25	28	29	29	26	
42	Regular	8	3	4	4	4	5	5	4	

43	Regular	31	8	10	9	7	6	6	7	
	HC	1	0	0	0	1	1	0	0	
44	Regular	22	7	10	9	6	5	7	6	
	HC	2	0	0	0	1	2	1	1	
	HC Van	1	0	0	0	1	0	0	0	
45	Regular	15	3	4	9	12	15	14	11	
	HC	2	0	0	0	1	0	0	0	
	HC Van	1	0	0	0	1	1	1	0	
	La Postas	6	3	4	4	5	6	6	5	
	Pawn Shop (Green)	4	0	0	0	0	0	0	0	
46	Regular	8	0	0	2	4	4	4	3	
	HC Van	1	0	0	0	0	0	0	0	
47	Regular	13	1	2	4	5	7	6	6	
	HC	1	0	0	1	0	0	0	0	
048	Regular	16	5	6	8	10	11	13	10	
	HC	1	0	0	0	1	1	1	0	
	Customer Only	9	1	2	3	5	7	5	4	
	Unmarked Spaces		1	1	1	1	1	0	0	
49	Regular	11	11	11	10	11	11	10	9	
	Unmarked Spaces		2	3	2	2	5	4	3	
50	Regular	14	3	3	4	3	5	4	4	
51	Regular	4	1	1	1	1	2	2	1	
52	Regular	13	10	10	11	9	11	10	9	
	HC	1	0	0	0	0	0	0	0	
	Dental	6	2	2	3	1	2	2	1	
53	Regular	10	4	5	5	3	4	3	3	
54	Regular	6	4	4	3	2	3	2	2	
	HC	1	0	0	0	0	0	0	0	
55	Regular	14	3	5	5	5	5	3	4	
	HC	1	0	0	0	0	0	0	0	
56	Regular	8	6	8	8	8	8	8	8	
	HC	1	1	1	1	1	1	1	1	
57	Regular	6	0	0	0	0	0	0	0	
	HC	1	0	0	0	0	0	0	0	
58	Regular	17	8	10	15	10	10	7	5	
	HC	1	0	0	0	0	0	0	0	
59	Regular	17	13	13	15	17	17	15	15	
	HC	1	0	1	1	1	0	0	0	
060 Dirt	Unmarked Spaces		0	0	0	0	0	0	0	
61	Regular	4	2	2	2	2	2	2	1	
	HC	1	0	0	0	0	0	0	0	
62	HC	1	0	0	0	0	0	0	0	
	Unmarked Spaces		5	5	4	4	5	4	4	
063 Carwash	Unmarked Spaces		3	4	3	3	3	4	2	
64	Regular	25	1	1	5	6	7	5	5	
	HC	1	0	0	1	1	0	0	0	
65	Regular	6	3	3	3	3	3	3	3	
66	Regular	17	11	13	14	14	13	15	11	
	HC	1	0	0	0	0	0	0	0	
67	Regular	16	1	2	2	2	3	2	3	
68	Regular	8	8	8	8	7	7	8	6	
	HC	1	1	1	1	0	0	0	0	
69	Regular	13	2	4	0	2	0	0	0	
	HC	1	0	0	0	0	0	0	0	
	HC Van	1	0	0	0	0	0	0	0	
70	Regular	23	23	23	21	23	20	21	19	
	HC	1	1	1	1	1	0	0	0	
	Reserved	2	1	1	0	1	1	1	0	
	Unmarked Spaces		2	2	1	1	2	0	0	
71	Regular	21	8	10	13	13	15	15	16	
	HC	1	0	0	0	0	0	0	0	
72	Regular	26	7	10	13	11	12	13	11	
	HC	1	1	1	0	0	0	0	0	
	HC Van	1	1	1	0	0	0	0	0	

Michael Baker
INTERNATIONAL

Attachment D: Existing Traffic Signal Timing Worksheets

LOCATION: **RTE 94 EB @ SWEETWATER SPRINGS BLVD**

CALTRANS C8 Version 3 7/6/2017 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	8	1	9	1	1	1	1	CLK RST
1	DONT WALK	1	17	1	32	1	1	1	1	
2	MIN GREEN	5	6	1	5	5	5	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	2.0	3.0	0.9	3.0	2.0	3.0	0.9	0.9	
6	MAX GAP	2.0	3.0	0.9	3.0	2.0	3.0	0.9	0.9	
7	MIN GAP	2.0	3.0	0.9	3.0	2.0	3.0	0.9	0.9	
8	MAX EXT	20	30	9	25	25	30	9	9	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.6	4.8	3.0	4.3	4.1	4.8	3.0	3.0	MIN
F	RED	2.0	1.5	0.0	2.0	1.0	1.5	0.0	0.0	SEC
3.5'	PED XING FT		57		112					
	BIKE XING FT	-	80		-	-	55			

	PRE-EMPTION E	
EV SEL		0
RR1 CLR		15
EVA DLY		0
EVA CLR		5
EVB DLY		0
EVB CLR		5
EVC DLY		0
EVC CLR		5
EVD DLY		0
EVD CLR		5
MAX EV		255
RR2 CLR		15

F FLAGS	1	2	3	4	5	6	7	8	
PERMIT	1	2		4	5	6			0
RED LOCK	1			4	5				1
YEL LOCK									2
V RECALL		2				6			3
P RECALL									4
PED PHASES		2		4					5
RT OLA									6
RT OLB									7
DBL ENTRY									8
MAX 2 PHASES									9
LAG PHASES	READ ONLY								A
RED REST									B
REST-IN-WALK									C
MAX 3 PHASES									D
YEL START UP		2				6			E
FIRST PHASE				4					F
	1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	30
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY ▒

LOCATION: **RTE 94 EB @ SWEETWATER SPRINGS BLVD**

CALTRANS C8 Version 3 4/22/2010 PAGE 2

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH														LAG FZ FREE		**2**		**4**		**6**		**8**	0
1	FZ1 GRN FCTR													GAPOUT CP1	LAG FZ CP 1									1
2														GAPOUT CP2	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A										OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		**2**				**6**			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8	*lcl*	

LOCATION	OFF	ON
1	*1*	**1**
2	*2*	
3	*4*	
4	*8*	
5	*16*	
6	*32*	
7		
8		

COO = **1**

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

LOCATION: **RTE 94 EB @ SWEETWATER SPRINGS BLVD**

CALTRANS C8 Version 3 4/22/2010

7 PAGE

9 PAGE C09 = 0 or 1

9 PAGE C09 = 2

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

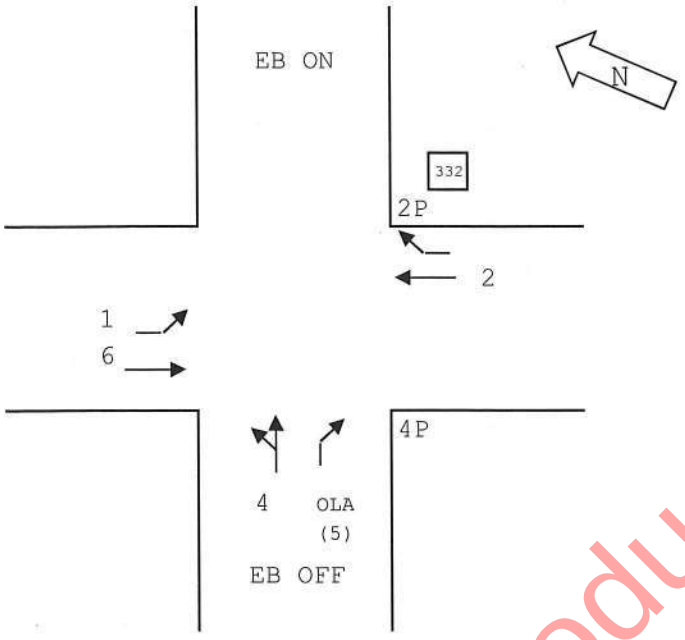
CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN
8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

LOCATION: RTE 94 EB @ SWEETWATER SPRINGS BLVD

CONFLICT MONITOR PROGRAM



LOCATION: **RTE 94 WB @ SWEETWATER SPRINGS BLVD**

CALTRANS C8 Version 3 7/6/2017 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	7	1	1	1	1	1	8	CLK RST
1	DONT WALK	1	29	1	1	1	1	1	36	
2	MIN GREEN	10	7	1	1	5	5	1	5	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	2.0	3.0	0.9	0.9	3.0	3.0	0.9	3.0	
6	MAX GAP	2.0	3.0	0.9	0.9	3.0	3.0	0.9	3.0	
7	MIN GAP	2.0	3.0	0.9	0.9	3.0	3.0	0.9	3.0	
8	MAX EXT	20	30	9	9	35	30	9	35	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.6	4.8	3.0	3.0	4.3	4.8	3.0	4.3	MIN
F	RED	2.0	2.0	0.0	0.0	2.0	1.5	0.0	2.0	SEC
3.5'	PED XING FT		100						124	
	BIKE XING FT	125	105			-	65		70	

PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
EV SEL	0	PERMIT	1	2			5	6		8	0
RR1 CLR	15	RED LOCK	1				5			8	1
EVA DLY	0	YEL LOCK									2
EVA CLR	5	V RECALL		2				6			3
EVB DLY	0	P RECALL									4
EVB CLR	5	PED PHASES		2						8	5
EVC DLY	0	RT OLA									6
EVC CLR	5	RT OLB									7
EVD DLY	0	DBL ENTRY									8
EVD CLR	5	MAX 2 PHASES									9
MAX EV	255	LAG PHASES	READ ONLY								A
RR2 CLR	15	RED REST									B
		REST-IN-WALK									C
		MAX 3 PHASES									D
		YEL START UP		2				6			E
		FIRST PHASE								8	F
			1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	30
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY ▒

LOCATION: **RTE 94 WB @ SWEETWATER SPRINGS BLVD**

CALTRANS C8 Version 3 4/22/2010

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH														LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR													GAPOUT CP1	LAG FZ CP 1									1
2														GAPOUT CP2	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A										OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		2				6			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8	*lcl*	

LOCATION	OFF	ON
1	*1*	
2	*2*	2
3	*4*	
4	*8*	
5	*16*	
6	*32*	
7		
8		

COO = 2

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

LOCATION: RTE 94 WB @ SWEETWATER SPRINGS BLVD

CALTRANS C8 Version 3

4/22/2010

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E

MINUTE = D-B-E

DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)

RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F

MINUTE = D-B-F

DAY = D-C-F

D-E-E = C8 VERSION NUMBER

D-E-F = LITHIUM BATTERY CONDITION

84 = BAD

85 = GOOD

LOCATION: **RTE 94 WB @ SWEETWATER SPRINGS BLVD**

CALTRANS C8 Version 3 4/22/2010

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

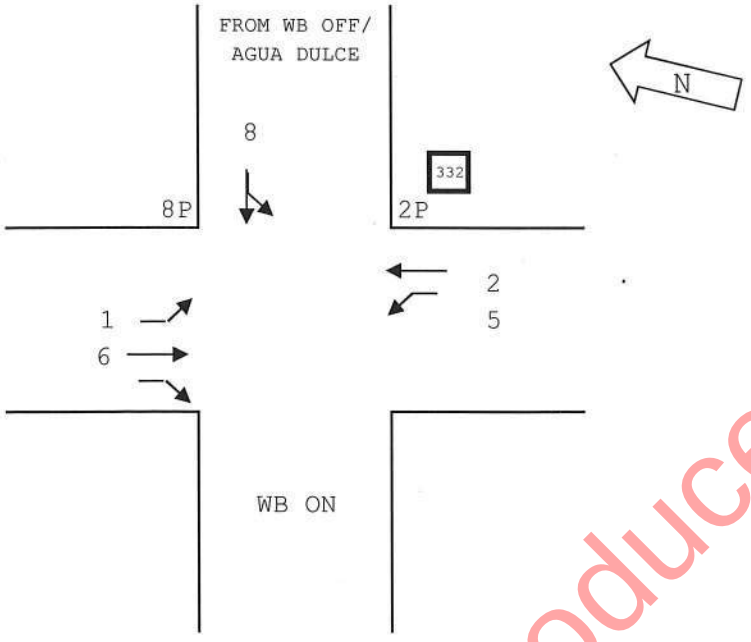
8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

LOCATION: RTE 94 WB @ SWEETWATER SPRINGS BLVD

CONFLICT MONITOR PROGRAM



INTERSECTION: CampoRd @ CasadeOro @ Granad 750

QuicNet System Parameters

Group Assignment: **#NAME?**
Field Master Assignment: **#NAME?**
System Reference Number: **18**
Commications Channel: **#NAME?**
Drop Address: **8**
Area Number: **6**
Area Address: **8**

N/S Street Name: **######**
E/W Street Name: **######**

Last *QuicNet* Database Change: **4/3/2014 12:10**

Notes:

Field Change Record

Change	By	Date	Change	By	Date

Excl Ped Assignment	#NAME?
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Exclusive Ped Phase

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	0
Don't Walk Output	0

Basic Phase Timing

	Phase 1	2	3	4	5	6	7	8
Min Green	4	6	4	4	8	6	0	4
Extension	1.0	4.0	1.0	1.0	4.0	2.0	0.0	1.0
Max	20	45	30	28	24	45	0	25
Max 2	0	0	0	0	0	0	0	0
Cond Serve Check	0	0	0	0	0	0	0	0

Clear

Yellow Change	3.9	4.3	3.2	3.2	3.9	4.3	0.0	3.2
Red Clear	0.5	1.0	1.0	1.0	0.5	1.0	0.0	1.0

Pedestrian Timing

Walk	0	7	7	7	0	7	0	0
Ped Clear - FDW	0	11	11	19	0	11	0	0
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	0	0	0	0	0	0	0

Volume Density

Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	4.0	1.0	1.0	5.0	2.0	0.0	1.0
Max Gap	2.0	3.0	0.5	0.5	5.0	1.0	0.0	0.5
Reduce Every	24.0	6.0	10.0	10.0	24.0	6.0	0.0	10.0

Phase Timing - Bank 1

	Phase 1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock	#NAME?	Red Rest	#NAME?
Yellow Lock	#NAME?	Dual Entry	#NAME?
Simultaneous Gap	#NAME?	Sequential Timing	#NAME?
Rest In Walk	#NAME?	Inhibit Ped Reservice	#NAME?
Advance Walk	#NAME?	Semi-Actuated	#NAME?
Flashing Walk	#NAME?	Guaranteed Passage	#NAME?
Max Extension	#NAME?	Conditional Service	#NAME?

Phase Functions - Page 1

Minimum Recall	#NAME?	Soft Recall	#NAME?
Ped Recall	#NAME?	External Recall	#NAME?
Maximum Recall	#NAME?	Manual Control Calls	#NAME?
Green Flash	#NAME?	Fast Green Flash	#NAME?
Overlap Green Flash	#NAME?	Fast Overlap G. Flash	#NAME?

Phase Functions - Page 2

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 2

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 3

INTERSECTION: Barcelona St @ Campo Rd 750

QuicNet System Parameters

Group Assignment: **######**
Field Master Assignment: **######**
System Reference Number: **17**
Commications Channel: **######**
Drop Address: **7**
Area Number: **6**
Area Address: **7**

N/S Street Name: **######**
E/W Street Name: **######**

Last *QuicNet* Database Change: **5/6/2014 13:22**

Notes:

Field Change Record

Change	By	Date	Change	By	Date

Excl Ped Assignment	**#NAME?**
Exclusive Walk	**0**
Exclusive FDW	**0**
All Red Clear	**0.0**

Exclusive Ped Phase

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	**0**
Don't Walk Output	**0**

	Phase 1	2	3	4	5	6	7	8
Basic Phase Timing: Min Green	**4**	**6**	**0**	**4**	**4**	**6**	**0**	**0**
Extension	**2.0**	**2.0**	**0.0**	**3.0**	**2.0**	**2.0**	**0.0**	**0.0**
Max	**30**	**45**	**0**	**36**	**30**	**45**	**0**	**0**
Max 2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cond Serve Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Clear: Yellow Change	**3.2**	**3.6**	**0.0**	**3.2**	**3.2**	**3.6**	**0.0**	**0.0**
Red Clear	**0.5**	**1.0**	**0.0**	**1.0**	**0.5**	**1.0**	**0.0**	**0.0**
Pedestrian Timing: Walk	**0**	**7**	**0**	**7**	**0**	**7**	**0**	**0**
Ped Clear - FDW	**0**	**12**	**0**	**19**	**0**	**13**	**0**	**0**
Adv / Delay Walk	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PE Min Ped FDW	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Volume Density: Type 3 Disconnect	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Added per Vehicle	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Max Added Initial	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Min Gap	**2.0**	**1.5**	**0.0**	**3.0**	**2.0**	**1.5**	**0.0**	**0.0**
Max Gap	**2.0**	**2.1**	**0.0**	**3.0**	**2.0**	**2.1**	**0.0**	**0.0**
Reduce Every	**0.0**	**7.0**	**0.0**	**0.0**	**0.0**	**7.0**	**0.0**	**0.0**

Phase Timing - Bank 1

	Phase 1	2	3	4	5	6	7	8
Alternate Walk	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Alternate Ped Clear	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Alternate Minimum	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Alternate Extension	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Alternate Timing - Bank 1

Red Lock	**#NAME?**	Red Rest	**#NAME?**
Yellow Lock	**#NAME?**	Dual Entry	**#NAME?**
Simultaneous Gap	**#NAME?**	Sequential Timing	**#NAME?**
Rest In Walk	**#NAME?**	Inhibit Ped Reservice	**#NAME?**
Advance Walk	**#NAME?**	Semi-Actuated	**#NAME?**
Flashing Walk	**#NAME?**	Guaranteed Passage	**#NAME?**
Max Extension	**#NAME?**	Conditional Service	**#NAME?**

Phase Functions - Page 1

Minimum Recall	**#NAME?**	Soft Recall	**#NAME?**
Ped Recall	**#NAME?**	External Recall	**#NAME?**
Maximum Recall	**#NAME?**	Manual Control Calls	**#NAME?**
Green Flash	**#NAME?**	Fast Green Flash	**#NAME?**
Overlap Green Flash	**#NAME?**	Fast Overlap G. Flash	**#NAME?**

Phase Functions - Page 2

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 2

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 3

INTERSECTION: Bonita St @ Campo Rd 750

QuicNet System Parameters

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **16**
Commications Channel: **Not Assigned**
Drop Address: **6**
Area Number: **6**
Area Address: **6**

N/S Street Name: **Bonita St**
E/W Street Name: **Campo Rd**

Last *QuicNet* Database Change: **8/1/2016 11:51**

Notes:

Field Change Record					
Change	By	Date	Change	By	Date

Exclusive Ped Phase	
Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	0
Don't Walk Output	0

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green	4	6	0	4	4	6	0	4
Extension	1.5	2.0	0.0	2.0	1.5	2.0	0.0	2.0
Max	20	50	0	27	20	50	0	27
Max 2	0	0	0	0	0	0	0	0
Cond Serve Check	0	0	0	0	0	0	0	0
Clear								
Yellow Change	3.6	4.1	0.0	3.6	3.6	4.1	0.0	3.6
Red Clear	0.5	1.0	0.0	1.0	0.5	1.0	0.0	1.0
Pedestrian Timing								
Walk	0	7	0	7	0	7	0	7
Ped Clear - FDW	0	12	0	19	0	12	0	19
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density								
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Max Added Initial	0	0	0	0	0	10	0	0
Min Gap	1.0	1.0	0.0	5.0	1.0	1.0	0.0	5.0
Max Gap	1.5	2.0	0.0	5.0	1.5	2.0	0.0	5.0
Reduce Every	10.0	10.0	0.0	24.0	10.0	10.0	0.0	24.0

Phase Timing - Bank 1

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	_2_4_6_8
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	_2___6__	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 2

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 3

QuicNet® System	
System ID	**15**
Group	**NONE**
Field Master	**NONE**
N-S Street	**Conrad**
E-W Street	**Campo**
Communications	
Channel	**UDP:8002:10.197.1.11**
Address	**5**
Area Number	**6**
Area Address	**5**
Database	
Last Changed	**3/19/2019 9:24**

QuicNet Timing Notes

Phase Timing - Bank 1								
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green	**4**	**6**	**4**	**0**	**6**	**4**	**4**	**0**
Extension	**2.0**	**2.0**	**2.0**	**0.0**	**2.0**	**2.0**	**2.0**	**0.0**
Max	**25**	**40**	**30**	**0**	**40**	**30**	**30**	**0**
Max 2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cond Serve Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Clearance Timing								
Yellow Change	**3.6**	**4.1**	**3.4**	**0.0**	**3.6**	**4.1**	**4.8**	**0.0**
Red Clear	**0.5**	**1.0**	**1.0**	**0.0**	**0.5**	**1.0**	**1.0**	**0.0**
Pedestrian Timing								
Walk	**0**	**7**	**0**	**0**	**0**	**7**	**0**	**0**
Pedestrian Change	**0**	**22**	**15**	**0**	**0**	**29**	**12**	**0**
Advance/Delay Walk	**0**	**0**	**7**	**0**	**0**	**0**	**7**	**0**
PE Min. Ped. Change	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Volume-Density								
Type 3 Disconnect	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Add per Vehicle	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Max Added Initial	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Min Gap	**2.0**	**2.0**	**2.0**	**0.0**	**2.0**	**2.0**	**2.0**	**0.0**
Max Gap	**2.0**	**2.0**	**2.0**	**0.0**	**2.0**	**2.0**	**2.0**	**0.0**
Reduce Every	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Alternate Timing								
Alternate Walk	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Alternate Ped. Change	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Alternate Minimum	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Alternate Extension	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Phase Timing - Exclusive Pedestrian	
Exclusive Ped Assignment	_____
Exclusive Walk	**0**
Exclusive Pedestrian Change	**0**
Red Clear	**0.0**
Walk Output	**0**
Don't Walk Output	**0**

Phase Functions - Page 1	
Red Lock	_____
Yellow Lock	**__3___7_**
Simultaneous Gap	_____
Rest In Walk	_____
Advance Walk	**__3___7_**
Flashing Walk	_____
Max Extension	_____
Red Rest	_____
Dual Entry	_____
Sequential Timing	_____
Inhibit Ped Reservice	_____
Delay Walk	_____
Guaranteed Passage	_____
Conditional Service	_____

Phase Functions - Page 2	
Minimum Recall	**_2__5___**
Ped Recall	_____
Maximum Recall	_____
Green Flash	_____
Overlap Green Flash	_____
Flashing Yellow Arrow for PPLT	_____
Max2	_____
Soft Recall	_____
External Recall	_____
Manual Control Calls	_____
Fast Green Flash	_____
Fast Overlap Green Flash	_____
Semi-Actuated	_____

Michael Baker
INTERNATIONAL

Attachment E:
Existing Conditions
Synchro Worksheets

Intersection	
Intersection Delay, s/veh	28.5
Intersection LOS	D

Movement	WBL	WBR	SEL	SER	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Traffic Vol, veh/h	0	0	1	102	0	552	259	55	460	0
Future Vol, veh/h	0	0	1	102	0	552	259	55	460	0
Peak Hour Factor	0.92	0.92	0.88	0.88	0.85	0.85	0.85	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	116	0	649	305	63	523	0
Number of Lanes	0	0	1	1	0	2	1	0	2	0

Approach	NE	SW
Opposing Approach	SW	NE
Opposing Lanes	2	3
Conflicting Approach Left	SE	
Conflicting Lanes Left	3	0
Conflicting Approach Right		SE
Conflicting Lanes Right	0	3
HCM Control Delay	27.4	39.2
HCM LOS	D	E

Lane	NELn1	NELn2	NELn3	SELn1	SELn2	SELn3	SWLn1	SWLn2
Vol Left, %	0%	0%	0%	100%	100%	0%	26%	0%
Vol Thru, %	100%	100%	0%	0%	0%	0%	74%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	276	276	259	170	171	102	208	307
LT Vol	0	0	0	170	171	0	55	0
Through Vol	276	276	0	0	0	0	153	307
RT Vol	0	0	259	0	0	102	0	0
Lane Flow Rate	325	325	305	193	194	116	237	348
Geometry Grp	8	8	8	7	7	7	8	8
Degree of Util (X)	0.762	0.762	0.495	0.475	0.478	0.246	0.601	0.872
Departure Headway (Hd)	8.444	8.444	5.844	8.986	8.986	7.755	9.141	9.005
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	432	432	609	403	403	466	395	404
Service Time	6.144	6.144	3.642	6.686	6.686	5.455	6.861	6.725
HCM Lane V/C Ratio	0.752	0.752	0.501	0.479	0.481	0.249	0.6	0.861
HCM Control Delay	33.5	33.5	14.3	19.6	19.6	13	24.7	49
HCM Lane LOS	D	D	B	C	C	B	C	E
HCM 95th-tile Q	6.4	6.4	2.7	2.5	2.5	1	3.8	8.7

Intersection	
Intersection Delay, s/veh	79.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	178	47	143	223	666	0	0	337	562
Future Vol, veh/h	0	0	0	178	47	143	223	666	0	0	337	562
Peak Hour Factor	0.96	0.96	0.96	0.79	0.79	0.79	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	225	59	181	259	774	0	0	374	624
Number of Lanes	0	0	0	0	1	1	1	2	0	0	2	1

Approach	WB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	3	3
Conflicting Approach Left	NE		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SW	WB	
Conflicting Lanes Right	3	2	0
HCM Control Delay	48.6	52.1	121.7
HCM LOS	E	F	F

Lane	NELn1	NELn2	NELn3	WBLn1	WBLn2	SWLn1	SWLn2	SWLn3
Vol Left, %	100%	0%	0%	79%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	21%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	223	333	333	225	143	169	169	562
LT Vol	223	0	0	178	0	0	0	0
Through Vol	0	333	333	47	0	169	169	0
RT Vol	0	0	0	0	143	0	0	562
Lane Flow Rate	259	387	387	285	181	187	187	624
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.704	0.997	0.809	0.893	0.513	0.527	0.527	1.319
Departure Headway (Hd)	10.45	9.929	8.121	11.931	10.811	10.137	10.137	7.604
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	347	368	449	305	335	358	358	481
Service Time	8.15	7.629	5.821	9.631	8.511	7.868	7.868	5.334
HCM Lane V/C Ratio	0.746	1.052	0.862	0.934	0.54	0.522	0.522	1.297
HCM Control Delay	34.6	78.7	37.2	63.9	24.4	23.7	23.7	180.5
HCM Lane LOS	D	F	E	F	C	C	C	F
HCM 95th-tile Q	5.1	11.6	7.5	8.2	2.8	2.9	2.9	27.3

Intersection	
Int Delay, s/veh	8.9

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	119	33	731	66	6	797
Future Vol, veh/h	119	33	731	66	6	797
Conflicting Peds, #/hr	0	0	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	89	89	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	125	35	821	74	7	886

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1321	454	0	0	901	0
Stage 1	864	-	-	-	-	-
Stage 2	457	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	148	553	-	-	750	-
Stage 1	373	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	144	550	-	-	746	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	371	-	-	-	-	-
Stage 2	593	-	-	-	-	-

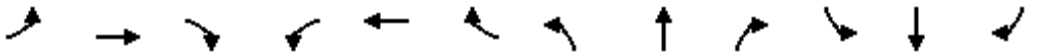
Approach	WB	NE	SW
HCM Control Delay, s	106.8	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NER	WBLn1	SWL	SWT
Capacity (veh/h)	-	-	171	746	-
HCM Lane V/C Ratio	-	-	0.936	0.009	-
HCM Control Delay (s)	-	-	106.8	9.9	0.1
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	7.1	0	-

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	182	74	736	517	205	562
Future Volume (vph)	182	74	736	517	205	562
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	4.0	4.1	5.1	4.4	4.1
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	2787
Peak-hour factor, PHF	0.83	0.83	0.91	0.91	0.89	0.89
Adj. Flow (vph)	219	89	809	568	230	631
RTOR Reduction (vph)	0	0	0	0	0	311
Lane Group Flow (vph)	219	89	809	568	230	320
Turn Type	NA	Free	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	3	5
Permitted Phases		Free				3
Actuated Green, G (s)	35.7	100.0	33.3	45.9	17.4	50.7
Effective Green, g (s)	35.7	100.0	33.3	45.9	17.4	50.7
Actuated g/C Ratio	0.36	1.00	0.33	0.46	0.17	0.51
Clearance Time (s)	5.1		4.1	5.1	4.4	4.1
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	1263	1583	1143	855	307	1413
v/s Ratio Prot	0.06		c0.24	c0.30	c0.13	0.08
v/s Ratio Perm		0.06				0.04
v/c Ratio	0.17	0.06	0.71	0.66	0.75	0.23
Uniform Delay, d1	22.0	0.0	29.1	21.1	39.2	13.7
Progression Factor	1.00	1.00	1.29	0.67	1.00	1.00
Incremental Delay, d2	0.3	0.1	1.3	3.1	8.5	0.0
Delay (s)	22.3	0.1	38.8	17.3	47.7	13.8
Level of Service	C	A	D	B	D	B
Approach Delay (s)	15.9			29.9	22.8	
Approach LOS	B			C	C	

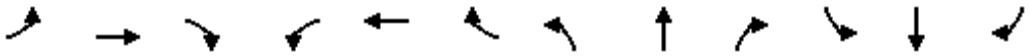
Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	457	10	10	898	111	0	0	2	146	10	378
Future Volume (vph)	225	457	10	10	898	111	0	0	2	146	10	378
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Lane Util. Factor	1.00	0.95		1.00	0.95				1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.96	1.00
Satd. Flow (prot)	1770	3526		1770	3476				1611		1780	1583
Flt Permitted	0.95	1.00		0.27	1.00				1.00		0.96	1.00
Satd. Flow (perm)	1770	3526		497	3476				1611		1780	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.92	0.92	0.92	0.50	0.50	0.50	0.86	0.86	0.86
Adj. Flow (vph)	274	557	12	11	976	121	0	0	4	170	12	440
RTOR Reduction (vph)	0	2	0	0	10	0	0	0	2	0	0	38
Lane Group Flow (vph)	274	567	0	11	1087	0	0	0	2	0	182	402
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA		Perm	NA				Perm	Split	NA	pm+ov
Protected Phases	1	6			2					7	7	1
Permitted Phases				2					2			7
Actuated Green, G (s)	23.1	35.7		45.9	45.9				45.9		16.0	39.1
Effective Green, g (s)	23.1	35.7		45.9	45.9				45.9		16.0	39.1
Actuated g/C Ratio	0.23	0.36		0.46	0.46				0.46		0.16	0.39
Clearance Time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Vehicle Extension (s)	2.0	2.0		2.0	2.0				2.0		2.0	2.0
Lane Grp Cap (vph)	408	1258		228	1595				739		284	618
v/s Ratio Prot	c0.15	0.16			c0.31						0.10	c0.15
v/s Ratio Perm				0.02					0.00			0.10
v/c Ratio	0.67	0.45		0.05	0.68				0.00		0.64	0.65
Uniform Delay, d1	35.0	24.6		15.0	21.3				14.7		39.3	24.9
Progression Factor	1.14	0.83		0.80	0.63				1.00		1.00	1.00
Incremental Delay, d2	3.3	1.1		0.3	2.0				0.0		3.7	1.9
Delay (s)	43.1	21.6		12.4	15.4				14.7		43.0	26.8
Level of Service	D	C		B	B				B		D	C
Approach Delay (s)		28.6			15.4			14.7			31.5	
Approach LOS		C			B			B			C	

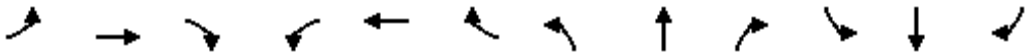
Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	450	35	29	978	92	68	20	30	45	12	60
Future Volume (veh/h)	44	450	35	29	978	92	68	20	30	45	12	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	517	40	36	1222	115	89	26	39	60	16	80
Peak Hour Factor	0.87	0.87	0.87	0.80	0.80	0.80	0.76	0.76	0.76	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	2341	181	45	2258	212	155	42	48	118	36	110
Arrive On Green	0.07	1.00	1.00	0.03	0.69	0.69	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3343	258	1781	3277	308	722	307	349	500	266	806
Grp Volume(v), veh/h	51	274	283	36	661	676	154	0	0	156	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1824	1781	1777	1807	1378	0	0	1571	0	0
Q Serve(g_s), s	2.8	0.0	0.0	2.0	18.4	18.6	1.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.8	0.0	0.0	2.0	18.4	18.6	11.0	0.0	0.0	9.4	0.0	0.0
Prop In Lane	1.00		0.14	1.00		0.17	0.58		0.25	0.38		0.51
Lane Grp Cap(c), veh/h	65	1245	1277	45	1225	1246	244	0	0	264	0	0
V/C Ratio(X)	0.78	0.22	0.22	0.80	0.54	0.54	0.63	0.00	0.00	0.59	0.00	0.00
Avail Cap(c_a), veh/h	287	1245	1277	287	1225	1246	595	0	0	630	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.77	0.77	0.77	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	45.9	0.0	0.0	48.5	7.7	7.7	42.0	0.0	0.0	41.3	0.0	0.0
Incr Delay (d2), s/veh	6.6	0.4	0.4	8.7	1.3	1.3	1.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	0.1	1.0	6.3	6.4	3.8	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	0.4	0.4	57.2	9.0	9.0	43.0	0.0	0.0	42.1	0.0	0.0
LnGrp LOS	D	A	A	E	A	A	D	A	A	D	A	A
Approach Vol, veh/h		608			1373			154			156	
Approach Delay, s/veh		4.7			10.3			43.0			42.1	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	75.1		18.2	7.8	74.0		18.2				
Change Period (Y+Rc), s	4.1	5.1		4.6	4.1	5.1		4.6				
Max Green Setting (Gmax), s	16.1	32.1		38.0	16.1	32.1		38.0				
Max Q Clear Time (g_c+I1), s	4.0	2.0		11.4	4.8	20.6		13.0				
Green Ext Time (p_c), s	0.0	2.1		0.6	0.0	4.8		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			13.2									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	340	158	30	793	35	289	33	56	20	12	18
Future Volume (veh/h)	13	340	158	30	793	35	289	33	56	20	12	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	420	195	38	1017	45	352	40	68	26	15	23
Peak Hour Factor	0.81	0.81	0.81	0.78	0.78	0.78	0.82	0.82	0.82	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	1205	554	48	1810	80	442	43	73	257	152	201
Arrive On Green	0.03	1.00	1.00	0.03	0.52	0.52	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1781	2365	1086	1781	3466	153	1117	127	216	610	449	594
Grp Volume(v), veh/h	16	314	301	38	521	541	460	0	0	64	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1675	1781	1777	1843	1459	0	0	1654	0	0
Q Serve(g_s), s	0.9	0.0	0.0	2.1	19.8	19.8	27.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	0.0	2.1	19.8	19.8	30.4	0.0	0.0	2.5	0.0	0.0
Prop In Lane	1.00		0.65	1.00		0.08	0.77		0.15	0.41		0.36
Lane Grp Cap(c), veh/h	26	905	853	48	928	962	558	0	0	611	0	0
V/C Ratio(X)	0.63	0.35	0.35	0.79	0.56	0.56	0.83	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	287	905	853	287	928	962	617	0	0	673	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.3	0.0	0.0	48.4	16.2	16.2	31.6	0.0	0.0	22.7	0.0	0.0
Incr Delay (d2), s/veh	8.8	1.0	1.1	10.2	0.5	0.5	8.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.3	1.1	7.6	7.9	11.8	0.0	0.0	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	1.0	1.1	58.6	16.6	16.6	39.9	0.0	0.0	22.8	0.0	0.0
LnGrp LOS	E	A	A	E	B	B	D	A	A	C	A	A
Approach Vol, veh/h		631			1100			460			64	
Approach Delay, s/veh		2.5			18.1			39.9			22.8	
Approach LOS		A			B			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	55.5		38.1	5.1	56.8		38.1				
Change Period (Y+Rc), s	3.7	4.6		* 4.2	3.7	4.6		* 4.2				
Max Green Setting (Gmax), s	16.1	33.4		* 38	16.1	33.4		* 38				
Max Q Clear Time (g_c+I1), s	4.1	2.0		4.5	2.9	21.8		32.4				
Green Ext Time (p_c), s	0.0	2.5		0.3	0.0	3.6		1.5				

Intersection Summary			
HCM 6th Ctrl Delay		18.3	
HCM 6th LOS		B	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	17.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	400	17	33	798	45	5	11	15	44	5	35
Future Vol, veh/h	32	400	17	33	798	45	5	11	15	44	5	35
Conflicting Peds, #/hr	3	0	13	13	0	3	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	75	75	75	41	41	41	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	476	20	44	1064	60	12	27	37	54	6	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1127	0	0	509	0	0	1198	1790	261	1513	1770	565
Stage 1	-	-	-	-	-	-	575	575	-	1185	1185	-
Stage 2	-	-	-	-	-	-	623	1215	-	328	585	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	616	-	-	1052	-	-	141	80	738	82	82	468
Stage 1	-	-	-	-	-	-	470	501	-	201	261	-
Stage 2	-	-	-	-	-	-	440	252	-	659	496	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	614	-	-	1039	-	-	109	71	729	~ 51	73	467
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	71	-	~ 51	73	-
Stage 1	-	-	-	-	-	-	435	464	-	188	249	-
Stage 2	-	-	-	-	-	-	373	241	-	553	460	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.3	57.5	270.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	140	614	-	-	1039	-	-	83
HCM Lane V/C Ratio	0.54	0.062	-	-	0.042	-	-	1.249
HCM Control Delay (s)	57.5	11.3	-	-	8.6	-	-	270.4
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	2.6	0.2	-	-	0.1	-	-	7.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL2	EBL	EBR	EBR2	NBL	NBT	NBR	NBR2	SBL	SBT	SBR	NWL2
Lane Configurations												
Traffic Volume (vph)	17	66	345	9	23	1	25	87	40	3	15	9
Future Volume (vph)	17	66	345	9	23	1	25	87	40	3	15	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.4	5.3			4.2				4.2		4.4
Lane Util. Factor		1.00	0.88			1.00				1.00		1.00
Frpb, ped/bikes		1.00	1.00			1.00				1.00		1.00
Flpb, ped/bikes		1.00	1.00			1.00				1.00		1.00
Frt		1.00	0.85			0.89				0.97		1.00
Flt Protected		0.95	1.00			0.99				0.97		0.95
Satd. Flow (prot)		1770	2787			1641				1738		1770
Flt Permitted		0.95	1.00			0.93				0.33		0.95
Satd. Flow (perm)		1770	2787			1537				586		1770
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.78	0.78	0.78	0.78	0.66	0.66	0.66	0.76
Adj. Flow (vph)	22	87	454	12	29	1	32	112	61	5	23	12
RTOR Reduction (vph)	0	0	83	0	0	55	0	0	0	11	0	0
Lane Group Flow (vph)	0	109	383	0	0	119	0	0	0	78	0	12
Confl. Bikes (#/hr)				3								
Turn Type	Prot	Prot	Prot		Perm	NA			Perm	NA		Prot
Protected Phases	5	5	2			8				4		1
Permitted Phases					8				4			
Actuated Green, G (s)		9.7	29.9			10.6				14.1		0.9
Effective Green, g (s)		9.7	29.9			10.6				14.1		0.9
Actuated g/C Ratio		0.11	0.33			0.12				0.16		0.01
Clearance Time (s)		4.4	5.3			4.2				4.2		4.4
Vehicle Extension (s)		4.0	4.0			1.0				1.0		1.0
Lane Grp Cap (vph)		189	920			180				91		17
v/s Ratio Prot		c0.06	0.14									0.01
v/s Ratio Perm						c0.08				c0.13		
v/c Ratio		0.58	0.42			0.66				0.86		0.71
Uniform Delay, d1		38.4	23.5			38.2				37.2		44.7
Progression Factor		1.00	1.00			1.00				1.00		1.00
Incremental Delay, d2		5.0	0.4			6.9				49.2		72.3
Delay (s)		43.5	23.9			45.1				86.4		117.0
Level of Service		D	C			D				F		F
Approach Delay (s)		27.6				45.1				86.4		
Approach LOS		C				D				F		

Intersection Summary			
HCM 2000 Control Delay	72.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	22.3
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL	NWR	NWR2	SWL2	SWL	SWR	SWR2
Lane Configurations							
Traffic Volume (vph)	704	26	51	49	17	140	14
Future Volume (vph)	704	26	51	49	17	140	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3				4.2	4.2	
Lane Util. Factor	0.97				1.00	0.95	
Frpb, ped/bikes	1.00				1.00	1.00	
Flpb, ped/bikes	1.00				1.00	1.00	
Frt	0.99				0.94	0.85	
Flt Protected	0.96				0.97	1.00	
Satd. Flow (prot)	3407				1696	1504	
Flt Permitted	0.96				0.97	1.00	
Satd. Flow (perm)	3407				1696	1504	
Peak-hour factor, PHF	0.76	0.76	0.76	0.71	0.71	0.71	0.71
Adj. Flow (vph)	926	34	67	69	24	197	20
RTOR Reduction (vph)	125	0	0	0	0	129	0
Lane Group Flow (vph)	902	0	0	0	160	21	0
Confl. Bikes (#/hr)							
Turn Type	Prot			Perm	Prot	Prot	
Protected Phases	6				3	3	
Permitted Phases				3			
Actuated Green, G (s)	21.1				12.7	12.7	
Effective Green, g (s)	21.1				12.7	12.7	
Actuated g/C Ratio	0.23				0.14	0.14	
Clearance Time (s)	5.3				4.2	4.2	
Vehicle Extension (s)	2.0				1.0	1.0	
Lane Grp Cap (vph)	794				238	211	
v/s Ratio Prot	c0.26					0.01	
v/s Ratio Perm					0.09		
v/c Ratio	1.14				0.67	0.10	
Uniform Delay, d1	34.7				36.9	33.9	
Progression Factor	1.00				1.00	1.00	
Incremental Delay, d2	76.4				5.8	0.1	
Delay (s)	111.1				42.7	34.0	
Level of Service	F				D	C	
Approach Delay (s)	111.2				38.5		
Approach LOS	F				D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	194	162	289	18	322	189	496	526	183
Future Volume (veh/h)	0	0	0	194	162	289	18	322	189	496	526	183
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1870	1900	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				234	195	348	22	393	230	557	591	206
Peak Hour Factor				0.83	0.83	0.83	0.82	0.82	0.82	0.89	0.89	0.89
Percent Heavy Veh, %				0	2	0	2	2	2	2	2	2
Cap, veh/h				203	169	302	75	629	363	528	1421	494
Arrive On Green				0.40	0.40	0.40	0.04	0.29	0.29	0.30	0.55	0.55
Sat Flow, veh/h				514	428	765	1781	2169	1253	1781	2586	900
Grp Volume(v), veh/h				777	0	0	22	321	302	557	406	391
Grp Sat Flow(s),veh/h/ln				1707	0	0	1781	1777	1645	1781	1777	1708
Q Serve(g_s), s				51.4	0.0	0.0	1.6	20.4	20.8	38.5	17.3	17.4
Cycle Q Clear(g_c), s				51.4	0.0	0.0	1.6	20.4	20.8	38.5	17.3	17.4
Prop In Lane				0.30		0.45	1.00		0.76	1.00		0.53
Lane Grp Cap(c), veh/h				675	0	0	75	515	477	528	976	939
V/C Ratio(X)				1.15	0.00	0.00	0.29	0.62	0.63	1.06	0.42	0.42
Avail Cap(c_a), veh/h				675	0	0	137	515	477	528	976	939
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	0.50	0.50	0.50
Uniform Delay (d), s/veh				39.3	0.0	0.0	60.4	40.0	40.1	45.8	17.1	17.1
Incr Delay (d2), s/veh				84.4	0.0	0.0	0.8	5.6	6.3	43.7	0.7	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				37.0	0.0	0.0	0.7	9.5	9.1	22.9	7.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				123.7	0.0	0.0	61.2	45.6	46.4	89.4	17.8	17.8
LnGrp LOS				F	A	A	E	D	D	F	B	B
Approach Vol, veh/h					777			645			1354	
Approach Delay, s/veh					123.7			46.5			47.3	
Approach LOS					F			D			D	

Timer - Assigned Phs	1	2		5	6		8					
Phs Duration (G+Y+Rc), s	11.1	78.7		44.8	45.0		57.7					
Change Period (Y+Rc), s	5.6	6.8		6.3	* 6.8		6.3					
Max Green Setting (Gmax), s	10.0	49.9		38.5	* 21		51.4					
Max Q Clear Time (g_c+I1), s	3.6	19.4		40.5	22.8		53.4					
Green Ext Time (p_c), s	0.0	5.3		0.0	0.0		0.0					

Intersection Summary	
HCM 6th Ctrl Delay	68.5
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	196	5	571	0	0	0	180	282	0	0	1124	240
Future Volume (vph)	196	5	571	0	0	0	180	282	0	0	1124	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3	4.5				5.6	6.3			6.3	6.3
Lane Util. Factor		1.00	1.00				1.00	0.95			0.95	1.00
Frt		1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected		0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)		1776	1583				1770	3539			3539	1583
Flt Permitted		0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (perm)		1776	1583				1770	3539			3539	1583
Peak-hour factor, PHF	0.81	0.81	0.81	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92
Adj. Flow (vph)	242	6	705	0	0	0	240	376	0	0	1222	261
RTOR Reduction (vph)	0	0	49	0	0	0	0	0	0	0	0	124
Lane Group Flow (vph)	0	248	656	0	0	0	240	376	0	0	1222	137
Turn Type	Perm	NA	custom				Prot	NA			NA	Perm
Protected Phases		4	5				1	6			2	
Permitted Phases	4		4									2
Actuated Green, G (s)		23.5	51.1				20.8	41.8			47.5	47.5
Effective Green, g (s)		23.5	51.1				20.8	41.8			47.5	47.5
Actuated g/C Ratio		0.21	0.46				0.19	0.38			0.43	0.43
Clearance Time (s)		6.3	4.5				5.6	6.3			6.3	6.3
Vehicle Extension (s)		3.0	3.0				2.0	3.0			3.0	3.0
Lane Grp Cap (vph)		379	735				334	1344			1528	683
v/s Ratio Prot			c0.22				0.14	0.11			c0.35	
v/s Ratio Perm		0.14	0.19									0.09
v/c Ratio		0.65	0.89				0.72	0.28			0.80	0.20
Uniform Delay, d1		39.5	26.9				41.9	23.7			27.1	19.4
Progression Factor		1.00	1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2		4.0	13.1				6.0	0.5			4.5	0.7
Delay (s)		43.6	40.1				47.9	24.2			31.6	20.1
Level of Service		D	D				D	C			C	C
Approach Delay (s)		41.0			0.0			33.4			29.6	
Approach LOS		D			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	110.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	202	0	0	334	314	60
Future Vol, veh/h	202	0	0	334	314	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	67	67	59	59
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	337	0	0	499	532	102

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	836	337
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	499	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	~ 337	705
Stage 1	-	0	0	-	723	-
Stage 2	-	0	0	-	610	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	~ 337	705
Mov Cap-2 Maneuver	-	-	-	-	~ 337	-
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	610	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	256
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBT
Capacity (veh/h)	337	705	-	-
HCM Lane V/C Ratio	1.579	0.144	-	-
HCM Control Delay (s)	$ 302.8	11	-	-
HCM Lane LOS	F	B	-	-
HCM 95th %tile Q(veh)	30.9	0.5	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Intersection Delay, s/veh	31.5
Intersection LOS	D

Movement	WBL	WBR	SEL	SER	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Traffic Vol, veh/h	0	0	4	204	0	427	210	81	462	0
Future Vol, veh/h	0	0	4	204	0	427	210	81	462	0
Peak Hour Factor	0.92	0.92	0.96	0.96	0.84	0.84	0.84	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	213	0	508	250	92	525	0
Number of Lanes	0	0	1	1	0	2	1	0	2	0

Approach	NE	SW
Opposing Approach	SW	NE
Opposing Lanes	2	3
Conflicting Approach Left	SE	
Conflicting Lanes Left	3	0
Conflicting Approach Right		SE
Conflicting Lanes Right	0	3
HCM Control Delay	24.3	49.4
HCM LOS	C	E

Lane	NELn1	NELn2	NELn3	SELn1	SELn2	SELn3	SWLn1	SWLn2
Vol Left, %	0%	0%	0%	100%	100%	0%	34%	0%
Vol Thru, %	100%	100%	0%	0%	0%	0%	66%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	214	214	210	248	252	204	235	308
LT Vol	0	0	0	248	252	0	81	0
Through Vol	214	214	0	0	0	0	154	308
RT Vol	0	0	210	0	0	204	0	0
Lane Flow Rate	254	254	250	258	263	212	267	350
Geometry Grp	8	8	8	7	7	7	8	8
Degree of Util (X)	0.659	0.659	0.474	0.643	0.653	0.456	0.72	0.926
Departure Headway (Hd)	9.341	9.341	6.828	8.954	8.954	7.722	9.702	9.524
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	386	386	525	406	407	470	371	382
Service Time	7.112	7.112	4.599	6.654	6.654	5.422	7.478	7.301
HCM Lane V/C Ratio	0.658	0.658	0.476	0.635	0.646	0.451	0.72	0.916
HCM Control Delay	28.5	28.5	15.7	26.4	27	16.7	34	61.1
HCM Lane LOS	D	D	C	D	D	C	D	F
HCM 95th-tile Q	4.5	4.5	2.5	4.3	4.5	2.3	5.4	9.8

Intersection	
Intersection Delay, s/veh	23.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	176	0	63	198	725	0	0	370	421
Future Vol, veh/h	0	0	0	176	0	63	198	725	0	0	370	421
Peak Hour Factor	0.96	0.96	0.96	0.89	0.89	0.89	0.92	0.92	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	198	0	71	215	788	0	0	378	430
Number of Lanes	0	0	0	0	1	1	1	2	0	0	2	1

Approach	WB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	3	3
Conflicting Approach Left	NE		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SW	WB	
Conflicting Lanes Right	3	2	0
HCM Control Delay	21.5	28.6	18.8
HCM LOS	C	D	C

Lane	NELn1	NELn2	NELn3	WBLn1	WBLn2	SWLn1	SWLn2	SWLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	198	363	363	176	63	185	185	421
LT Vol	198	0	0	176	0	0	0	0
Through Vol	0	363	363	0	0	185	185	0
RT Vol	0	0	0	0	63	0	0	421
Lane Flow Rate	215	394	394	198	71	189	189	430
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.5	0.858	0.664	0.549	0.172	0.434	0.434	0.689
Departure Headway (Hd)	8.356	7.843	6.064	9.991	8.772	8.271	8.271	5.771
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	433	465	599	360	408	436	436	627
Service Time	6.082	5.569	3.79	7.768	6.548	5.999	5.999	3.499
HCM Lane V/C Ratio	0.497	0.847	0.658	0.55	0.174	0.433	0.433	0.686
HCM Control Delay	19.2	42.3	20	24.4	13.4	17.2	17.2	20.3
HCM Lane LOS	C	E	C	C	B	C	C	C
HCM 95th-tile Q	2.7	8.7	4.9	3.2	0.6	2.1	2.1	5.4

Intersection	
Int Delay, s/veh	7.2

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	129	36	673	113	18	660
Future Vol, veh/h	129	36	673	113	18	660
Conflicting Peds, #/hr	0	0	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	98	98	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	137	38	687	115	20	717

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1150	407	0	0	808	0
Stage 1	751	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	192	593	-	-	813	-
Stage 1	427	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	183	590	-	-	808	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	424	-	-	-	-	-
Stage 2	620	-	-	-	-	-

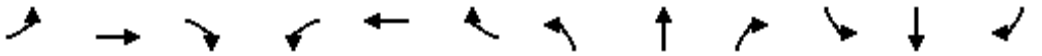
Approach	WB	NE	SW
HCM Control Delay, s	69.1	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NER	WBLn1	SWL	SWT
Capacity (veh/h)	-	-	215	808	-
HCM Lane V/C Ratio	-	-	0.816	0.024	-
HCM Control Delay (s)	-	-	69.1	9.6	0.2
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	6	0.1	-

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	349	108	553	191	103	612
Future Volume (vph)	349	108	553	191	103	612
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	4.0	4.1	5.1	4.4	4.1
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	2787
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.96	0.96
Adj. Flow (vph)	367	114	570	197	107	638
RTOR Reduction (vph)	0	0	0	0	0	385
Lane Group Flow (vph)	367	114	570	197	107	253
Turn Type	NA	Free	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	3	5
Permitted Phases		Free				3
Actuated Green, G (s)	46.8	100.0	26.4	60.7	13.2	39.6
Effective Green, g (s)	46.8	100.0	26.4	60.7	13.2	39.6
Actuated g/C Ratio	0.47	1.00	0.26	0.61	0.13	0.40
Clearance Time (s)	5.1		4.1	5.1	4.4	4.1
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	1656	1583	906	1130	233	1103
v/s Ratio Prot	c0.10		c0.17	0.11	c0.06	0.06
v/s Ratio Perm		0.07				0.03
v/c Ratio	0.22	0.07	0.63	0.17	0.46	0.23
Uniform Delay, d1	15.8	0.0	32.5	8.6	40.1	20.1
Progression Factor	1.00	1.00	1.50	0.38	1.00	1.00
Incremental Delay, d2	0.3	0.1	1.0	0.3	0.5	0.0
Delay (s)	16.1	0.1	49.6	3.6	40.6	20.1
Level of Service	B	A	D	A	D	C
Approach Delay (s)	12.3			37.8	23.0	
Approach LOS	B			D	C	

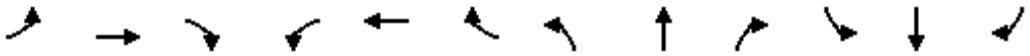
Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	819	15	14	584	52	0	0	12	79	13	157
Future Volume (vph)	135	819	15	14	584	52	0	0	12	79	13	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Lane Util. Factor	1.00	0.95		1.00	0.95				1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.96	1.00
Satd. Flow (prot)	1770	3528		1770	3492				1611		1786	1583
Flt Permitted	0.95	1.00		0.17	1.00				1.00		0.96	1.00
Satd. Flow (perm)	1770	3528		321	3492				1611		1786	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96	0.75	0.75	0.75	0.93	0.93	0.93
Adj. Flow (vph)	145	881	16	15	608	54	0	0	16	85	14	169
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	6	0	0	128
Lane Group Flow (vph)	145	896	0	15	657	0	0	0	10	0	99	41
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA		Perm	NA				Perm	Split	NA	pm+ov
Protected Phases	1	6			2					7	7	1
Permitted Phases				2					2			7
Actuated Green, G (s)	12.5	46.8		60.7	60.7				60.7		11.8	24.3
Effective Green, g (s)	12.5	46.8		60.7	60.7				60.7		11.8	24.3
Actuated g/C Ratio	0.12	0.47		0.61	0.61				0.61		0.12	0.24
Clearance Time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Vehicle Extension (s)	2.0	2.0		2.0	2.0				2.0		2.0	2.0
Lane Grp Cap (vph)	221	1651		194	2119				977		210	384
v/s Ratio Prot	c0.08	c0.25			c0.19						c0.06	0.01
v/s Ratio Perm				0.05					0.01			0.01
v/c Ratio	0.66	0.54		0.08	0.31				0.01		0.47	0.11
Uniform Delay, d1	41.7	19.0		8.1	9.5				7.8		41.2	29.4
Progression Factor	1.11	0.77		0.65	0.67				1.00		1.00	1.00
Incremental Delay, d2	5.1	1.2		0.8	0.4				0.0		0.6	0.0
Delay (s)	51.3	15.9		6.0	6.7				7.8		41.8	29.5
Level of Service	D	B		A	A				A		D	C
Approach Delay (s)		20.9			6.7			7.8			34.0	
Approach LOS		C			A			A			C	

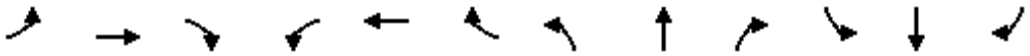
Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	675	55	23	493	19	74	15	54	33	18	40
Future Volume (veh/h)	41	675	55	23	493	19	74	15	54	33	18	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	734	60	24	514	20	85	17	62	52	29	63
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.87	0.87	0.87	0.63	0.63	0.63
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	2346	192	35	2413	94	147	31	75	111	60	95
Arrive On Green	0.06	1.00	1.00	0.02	0.69	0.69	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3326	272	1781	3484	135	673	225	545	449	438	690
Grp Volume(v), veh/h	45	392	402	24	262	272	164	0	0	144	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1821	1781	1777	1843	1443	0	0	1578	0	0
Q Serve(g_s), s	2.5	0.0	0.0	1.3	5.3	5.3	2.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.5	0.0	0.0	1.3	5.3	5.3	11.1	0.0	0.0	8.5	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.07	0.52		0.38	0.36		0.44
Lane Grp Cap(c), veh/h	57	1253	1284	35	1230	1276	253	0	0	266	0	0
V/C Ratio(X)	0.79	0.31	0.31	0.69	0.21	0.21	0.65	0.00	0.00	0.54	0.00	0.00
Avail Cap(c_a), veh/h	287	1253	1284	287	1230	1276	604	0	0	635	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.99	0.99	0.99	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	46.4	0.0	0.0	48.7	5.5	5.5	41.9	0.0	0.0	40.8	0.0	0.0
Incr Delay (d2), s/veh	7.1	0.5	0.5	8.7	0.4	0.4	1.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.2	0.2	0.7	1.8	1.9	4.0	0.0	0.0	3.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	0.5	0.5	57.4	5.9	5.9	42.9	0.0	0.0	41.4	0.0	0.0
LnGrp LOS	D	A	A	E	A	A	D	A	A	D	A	A
Approach Vol, veh/h		839			558			164			144	
Approach Delay, s/veh		3.4			8.1			42.9			41.4	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	75.6		18.3	7.3	74.3		18.3				
Change Period (Y+Rc), s	4.1	5.1		4.6	4.1	5.1		4.6				
Max Green Setting (Gmax), s	16.1	32.1		38.0	16.1	32.1		38.0				
Max Q Clear Time (g_c+I1), s	3.3	2.0		10.5	4.5	7.3		13.1				
Green Ext Time (p_c), s	0.0	3.2		0.6	0.0	2.0		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		12.0	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	494	236	57	363	20	147	9	63	22	26	22
Future Volume (veh/h)	10	494	236	57	363	20	147	9	63	22	26	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	509	243	59	374	21	156	10	67	29	34	29
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.94	0.94	0.94	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	1513	720	76	2329	130	242	13	79	120	137	96
Arrive On Green	0.02	1.00	1.00	0.04	0.68	0.68	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	2336	1111	1781	3421	191	986	71	427	396	741	523
Grp Volume(v), veh/h	10	387	365	59	194	201	233	0	0	92	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1670	1781	1777	1836	1484	0	0	1659	0	0
Q Serve(g_s), s	0.6	0.0	0.0	3.3	3.9	3.9	10.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	0.0	3.3	3.9	3.9	15.0	0.0	0.0	4.5	0.0	0.0
Prop In Lane	1.00		0.66	1.00		0.10	0.67		0.29	0.32		0.32
Lane Grp Cap(c), veh/h	17	1151	1082	76	1210	1250	334	0	0	353	0	0
V/C Ratio(X)	0.58	0.34	0.34	0.77	0.16	0.16	0.70	0.00	0.00	0.26	0.00	0.00
Avail Cap(c_a), veh/h	287	1151	1082	287	1210	1250	611	0	0	661	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.8	0.0	0.0	47.4	5.7	5.7	39.1	0.0	0.0	35.1	0.0	0.0
Incr Delay (d2), s/veh	10.4	0.8	0.8	6.1	0.0	0.0	2.6	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.2	1.6	1.3	1.3	5.8	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	0.8	0.8	53.5	5.7	5.7	41.8	0.0	0.0	35.5	0.0	0.0
LnGrp LOS	E	A	A	D	A	A	D	A	A	D	A	A
Approach Vol, veh/h		762			454			233			92	
Approach Delay, s/veh		1.6			11.9			41.8			35.5	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	69.4		22.6	4.7	72.7		22.6				
Change Period (Y+Rc), s	3.7	4.6		* 4.2	3.7	4.6		* 4.2				
Max Green Setting (Gmax), s	16.1	33.4		* 38	16.1	33.4		* 38				
Max Q Clear Time (g_c+I1), s	5.3	2.0		6.5	2.6	5.9		17.0				
Green Ext Time (p_c), s	0.0	3.2		0.5	0.0	1.4		1.4				

Intersection Summary		
HCM 6th Ctrl Delay		12.7
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	527	17	27	365	28	10	4	20	33	11	49
Future Vol, veh/h	60	527	17	27	365	28	10	4	20	33	11	49
Conflicting Peds, #/hr	3	0	13	13	0	3	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	96	96	96	77	77	77	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	573	18	28	380	29	13	5	26	42	14	63

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	412	0	0	604	0	0	978	1193	309	873	1188	208
Stage 1	-	-	-	-	-	-	725	725	-	454	454	-
Stage 2	-	-	-	-	-	-	253	468	-	419	734	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1143	-	-	970	-	-	205	186	687	244	187	798
Stage 1	-	-	-	-	-	-	383	428	-	555	568	-
Stage 2	-	-	-	-	-	-	729	560	-	582	424	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1140	-	-	958	-	-	163	168	678	214	169	796
Mov Cap-2 Maneuver	-	-	-	-	-	-	163	168	-	214	169	-
Stage 1	-	-	-	-	-	-	357	399	-	522	550	-
Stage 2	-	-	-	-	-	-	635	542	-	521	395	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.6	19.2	21.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	297	1140	-	-	958	-	-	331
HCM Lane V/C Ratio	0.149	0.057	-	-	0.029	-	-	0.36
HCM Control Delay (s)	19.2	8.3	-	-	8.9	-	-	21.9
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0.1	-	-	1.6

Movement	EBL2	EBL	EBR	EBR2	NBL	NBT	NBR	NBR2	SBL	SBT	SBR	NWL2
Lane Configurations												
Traffic Volume (vph)	3	83	474	9	13	1	7	49	29	3	9	19
Future Volume (vph)	3	83	474	9	13	1	7	49	29	3	9	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.4	5.3			4.2				4.2		4.4
Lane Util. Factor		1.00	0.88			1.00				1.00		1.00
Frpb, ped/bikes		1.00	1.00			1.00				1.00		1.00
Flpb, ped/bikes		1.00	1.00			1.00				1.00		1.00
Frt		1.00	0.85			0.89				0.97		1.00
Flt Protected		0.95	1.00			0.99				0.97		0.95
Satd. Flow (prot)		1770	2787			1645				1746		1770
Flt Permitted		0.95	1.00			0.92				0.38		0.95
Satd. Flow (perm)		1770	2787			1526				686		1770
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.80	0.80	0.80	0.80	0.60	0.60	0.60	0.92
Adj. Flow (vph)	3	88	504	10	16	1	9	61	48	5	15	21
RTOR Reduction (vph)	0	0	78	0	0	57	0	0	0	9	0	0
Lane Group Flow (vph)	0	91	436	0	0	30	0	0	0	59	0	21
Confl. Bikes (#/hr)				3								
Turn Type	Prot	Prot	Prot		Perm	NA			Perm	NA		Prot
Protected Phases	5	5	2			8				4		1
Permitted Phases					8				4			
Actuated Green, G (s)		8.4	29.1			4.4				10.9		1.7
Effective Green, g (s)		8.4	29.1			4.4				10.9		1.7
Actuated g/C Ratio		0.11	0.39			0.06				0.14		0.02
Clearance Time (s)		4.4	5.3			4.2				4.2		4.4
Vehicle Extension (s)		4.0	4.0			1.0				1.0		1.0
Lane Grp Cap (vph)		197	1078			89				99		40
v/s Ratio Prot		c0.05	c0.16									0.01
v/s Ratio Perm						c0.02				c0.09		
v/c Ratio		0.46	0.40			0.33				0.59		0.53
Uniform Delay, d1		31.3	16.8			34.0				30.1		36.4
Progression Factor		1.00	1.00			1.00				1.00		1.00
Incremental Delay, d2		2.3	0.3			0.8				6.2		5.6
Delay (s)		33.6	17.1			34.8				36.2		42.0
Level of Service		C	B			C				D		D
Approach Delay (s)		19.6				34.8				36.2		
Approach LOS		B				C				D		

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.2	Sum of lost time (s)	22.3
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL	NWR	NWR2	SWL2	SWL	SWR	SWR2
Lane Configurations							
Traffic Volume (vph)	312	11	44	39	5	78	4
Future Volume (vph)	312	11	44	39	5	78	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3				4.2	4.2	
Lane Util. Factor	0.97				1.00	0.95	
Frpb, ped/bikes	1.00				1.00	1.00	
Flpb, ped/bikes	1.00				1.00	1.00	
Frt	0.98				0.95	0.85	
Flt Protected	0.96				0.97	1.00	
Satd. Flow (prot)	3388				1715	1504	
Flt Permitted	0.96				0.97	1.00	
Satd. Flow (perm)	3388				1715	1504	
Peak-hour factor, PHF	0.92	0.92	0.92	0.77	0.77	0.77	0.77
Adj. Flow (vph)	339	12	48	51	6	101	5
RTOR Reduction (vph)	117	0	0	0	0	72	0
Lane Group Flow (vph)	282	0	0	0	84	7	0
Confl. Bikes (#/hr)							
Turn Type	Prot			Perm	Prot	Prot	
Protected Phases	6				3	3	
Permitted Phases				3			
Actuated Green, G (s)	22.4				6.8	6.8	
Effective Green, g (s)	22.4				6.8	6.8	
Actuated g/C Ratio	0.30				0.09	0.09	
Clearance Time (s)	5.3				4.2	4.2	
Vehicle Extension (s)	2.0				1.0	1.0	
Lane Grp Cap (vph)	1009				155	136	
v/s Ratio Prot	0.08					0.00	
v/s Ratio Perm					0.05		
v/c Ratio	0.28				0.54	0.05	
Uniform Delay, d1	20.2				32.7	31.3	
Progression Factor	1.00				1.00	1.00	
Incremental Delay, d2	0.1				2.1	0.1	
Delay (s)	20.3				34.8	31.3	
Level of Service	C				C	C	
Approach Delay (s)	21.4				33.1		
Approach LOS	C				C		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEU	SEL	SET	SER	NWL	NWT
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	201	63	155	2	8	443	126	519	273
Future Volume (veh/h)	0	0	0	201	63	155	2	8	443	126	519	273
Initial Q (Qb), veh				0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00		1.00		1.00	1.00	
Parking Bus, Adj				1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No				No			No
Adj Sat Flow, veh/h/ln				1900	1870	1900		1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				242	76	187		9	509	145	558	294
Peak Hour Factor				0.83	0.83	0.83		0.87	0.87	0.87	0.93	0.93
Percent Heavy Veh, %				0	2	0		2	2	2	2	2
Cap, veh/h				262	82	202		38	608	172	530	1398
Arrive On Green				0.32	0.32	0.32		0.02	0.22	0.22	0.30	0.50
Sat Flow, veh/h				822	258	635		1781	2733	775	1781	2772
Grp Volume(v), veh/h				505	0	0		9	330	324	558	187
Grp Sat Flow(s),veh/h/ln				1715	0	0		1781	1777	1731	1781	1777
Q Serve(g_s), s				34.1	0.0	0.0		0.6	21.3	21.5	35.7	7.0
Cycle Q Clear(g_c), s				34.1	0.0	0.0		0.6	21.3	21.5	35.7	7.0
Prop In Lane				0.48		0.37		1.00		0.45	1.00	
Lane Grp Cap(c), veh/h				546	0	0		38	395	385	530	896
V/C Ratio(X)				0.92	0.00	0.00		0.23	0.84	0.84	1.05	0.21
Avail Cap(c_a), veh/h				629	0	0		148	395	385	530	896
HCM Platoon Ratio				1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00		1.00	1.00	1.00	0.77	0.77
Uniform Delay (d), s/veh				39.5	0.0	0.0		57.7	44.6	44.6	42.2	16.5
Incr Delay (d2), s/veh				18.2	0.0	0.0		1.1	18.5	19.5	49.1	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				17.0	0.0	0.0		0.3	11.2	11.1	22.4	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				57.7	0.0	0.0		58.9	63.0	64.2	91.2	16.9
LnGrp LOS				E	A	A		E	E	E	F	B
Approach Vol, veh/h					505				663			932
Approach Delay, s/veh					57.7				63.5			61.4
Approach LOS					E				E			E

Timer - Assigned Phs	1	2		5	6		8					
Phs Duration (G+Y+Rc), s	8.2	67.3		42.0	33.5		44.5					
Change Period (Y+Rc), s	5.6	6.8		6.3	* 6.8		6.3					
Max Green Setting (Gmax), s	10.0	47.3		35.7	* 21		44.0					
Max Q Clear Time (g_c+I1), s	2.6	9.2		37.7	23.5		36.1					
Green Ext Time (p_c), s	0.0	2.2		0.0	0.0		2.1					

Intersection Summary		
HCM 6th Ctrl Delay		61.2
HCM 6th LOS		E

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	NWR
Lane Configurations	
Traffic Volume (veh/h)	74
Future Volume (veh/h)	74
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1870
Adj Flow Rate, veh/h	80
Peak Hour Factor	0.93
Percent Heavy Veh, %	2
Cap, veh/h	374
Arrive On Green	0.50
Sat Flow, veh/h	741
Grp Volume(v), veh/h	187
Grp Sat Flow(s),veh/h/ln	1737
Q Serve(g_s), s	7.2
Cycle Q Clear(g_c), s	7.2
Prop In Lane	0.43
Lane Grp Cap(c), veh/h	876
V/C Ratio(X)	0.21
Avail Cap(c_a), veh/h	876
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.77
Uniform Delay (d), s/veh	16.5
Incr Delay (d2), s/veh	0.4
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	2.9
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	17.0
LnGrp LOS	B
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	139	1	800	0	0	0	189	456	0	0	722	208
Future Volume (vph)	139	1	800	0	0	0	189	456	0	0	722	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3	5.1				5.6	6.3			6.3	6.3
Lane Util. Factor		1.00	1.00				1.00	0.95			0.95	1.00
Frt		1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected		0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)		1775	1583				1770	3539			3539	1583
Flt Permitted		0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (perm)		1775	1583				1770	3539			3539	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.92	0.92	0.92	0.96	0.96	0.96	0.89	0.89	0.89
Adj. Flow (vph)	143	1	825	0	0	0	197	475	0	0	811	234
RTOR Reduction (vph)	0	0	35	0	0	0	0	0	0	0	0	144
Lane Group Flow (vph)	0	144	790	0	0	0	197	475	0	0	811	90
Turn Type	Perm	NA	custom				Prot	NA			NA	Perm
Protected Phases		4	5				1	6			2	
Permitted Phases	4		4									2
Actuated Green, G (s)		17.4	45.3				19.9	27.0			34.5	34.5
Effective Green, g (s)		17.4	45.3				19.9	27.0			34.5	34.5
Actuated g/C Ratio		0.19	0.50				0.22	0.30			0.38	0.38
Clearance Time (s)		6.3	5.1				5.6	6.3			6.3	6.3
Vehicle Extension (s)		3.0	2.0				2.0	3.0			3.0	3.0
Lane Grp Cap (vph)		343	796				391	1061			1356	606
v/s Ratio Prot			c0.31				0.11	0.13			c0.23	
v/s Ratio Perm		0.08	0.19									0.06
v/c Ratio		0.42	0.99				0.50	0.45			0.60	0.15
Uniform Delay, d1		31.9	22.2				30.7	25.5			22.2	18.1
Progression Factor		1.00	1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2		0.8	29.8				0.4	1.4			2.0	0.5
Delay (s)		32.7	51.9				31.1	26.8			24.2	18.7
Level of Service		C	D				C	C			C	B
Approach Delay (s)		49.1			0.0			28.1			22.9	
Approach LOS		D			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	8.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	81	0	0	107	316	14
Future Vol, veh/h	81	0	0	107	316	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	67	67	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	113	0	0	160	340	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	273	113
Stage 1	-	-	-	-	113	-
Stage 2	-	-	-	-	160	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	716	940
Stage 1	-	0	0	-	912	-
Stage 2	-	0	0	-	869	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	716	940
Mov Cap-2 Maneuver	-	-	-	-	716	-
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	869	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBT
Capacity (veh/h)	716	940	-	-
HCM Lane V/C Ratio	0.475	0.016	-	-
HCM Control Delay (s)	14.5	8.9	-	-
HCM Lane LOS	B	A	-	-
HCM 95th %tile Q(veh)	2.6	0	-	-

Michael Baker
INTERNATIONAL

Attachment F: Parking Utilization Worksheets

On-Street Parking Utilization

Parking Zone	Street	Segment	Side-of-Street	Inventory		10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
01	San Juan St	School Driveway to Bonita St.	North	7	Occupancy	3	5	5	4	4	4	3
					Percent	42.9%	71.4%	71.4%	57.1%	57.1%	57.1%	42.9%
		Conrad Dr. to 180' East of Conrad Dr.	South	9	Occupancy	6	8	8	7	8	8	7
					Percent	66.7%	88.9%	88.9%	77.8%	88.9%	88.9%	77.8%
02	Dolores St	Barcelona St. to Cordoba Ave.	North	10	Occupancy	9	9	10	10	10	9	9
					Percent	90.0%	90.0%	100.0%	100.0%	100.0%	90.0%	90.0%
			South	10	Occupancy	3	3	7	8	9	7	8
					Percent	30.0%	30.0%	70.0%	80.0%	90.0%	70.0%	80.0%
03	Dolores St	Cordoba Ave. to Granada Ave.	North	8	Occupancy	4	4	4	4	5	5	6
					Percent	50.0%	50.0%	50.0%	50.0%	62.5%	62.5%	75.0%
			South	8	Occupancy	4	4	4	4	4	4	4
					Percent	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
04	Conrad Dr	San Juan St. to Campo Rd.	East	7	Occupancy	4	5	5	4	5	5	5
					Percent	57.1%	71.4%	71.4%	57.1%	71.4%	71.4%	71.4%
			West	6	Occupancy	2	4	4	4	4	3	2
					Percent	33.3%	66.7%	66.7%	66.7%	66.7%	50.0%	33.3%
05	Bonita St	San Juan St. to Campo Rd.	East	7	Occupancy	3	3	3	4	5	5	4
					Percent	42.9%	42.9%	42.9%	57.1%	71.4%	71.4%	57.1%
			West	10	Occupancy	3	5	5	4	3	3	4
					Percent	30.0%	50.0%	50.0%	40.0%	30.0%	30.0%	40.0%
06	Bonita St	Campo Rd. to Dolores St.	East	5	Occupancy	4	5	5	5	5	5	4
					Percent	80.0%	100.0%	100.0%	100.0%	100.0%	100.0%	80.0%
			West	8	Occupancy	6	6	6	5	5	5	5
					Percent	75.0%	75.0%	75.0%	62.5%	62.5%	62.5%	62.5%
07	Barcelona St	San Juan St. to Campo Rd.	East	7	Occupancy	6	7	6	4	4	4	3
					Percent	85.7%	100.0%	85.7%	57.1%	57.1%	57.1%	42.9%
			West	7	Occupancy	3	4	4	3	3	3	4
					Percent	42.9%	57.1%	57.1%	42.9%	42.9%	42.9%	57.1%
08	Barcelona St	Campo Rd. to Dolores St.	East	5	Occupancy	5	5	4	3	3	4	4
					Percent	100.0%	100.0%	80.0%	60.0%	60.0%	80.0%	80.0%
			West	6	Occupancy	6	6	5	5	5	5	5
					Percent	100.0%	100.0%	83.3%	83.3%	83.3%	83.3%	83.3%
09	Cordoba Ave	San Juan St. to Campo Rd.	East	8	Occupancy	1	1	2	2	2	2	1
					Percent	12.5%	12.5%	25.0%	25.0%	25.0%	25.0%	12.5%
			West	5	Occupancy	0	0	0	0	1	1	0
					Percent	0.0%	0.0%	0.0%	0.0%	20.0%	20.0%	0.0%
10	Cordoba Ave	Campo Rd. to Dolores St.	East	6	Occupancy	6	6	5	4	4	5	3
					Percent	100.0%	100.0%	83.3%	66.7%	66.7%	83.3%	50.0%
			West	8	Occupancy	4	4	3	4	3	4	2
					Percent	50.0%	50.0%	37.5%	50.0%	37.5%	50.0%	25.0%
11	Granda Ave	San Juan St. to Campo Rd.	East	8	Occupancy	6	6	7	8	8	7	6
					Percent	75.0%	75.0%	87.5%	100.0%	100.0%	87.5%	75.0%
			West	5	Occupancy	3	3	4	4	2	2	2
					Percent	60.0%	60.0%	80.0%	80.0%	40.0%	40.0%	40.0%
12	Granda Ave	Campo Rd. to Dolores St.	East	8	Occupancy	1	1	1	0	0	1	0
					Percent	12.5%	12.5%	12.5%	0.0%	0.0%	12.5%	0.0%
			West	7	Occupancy	0	0	1	0	0	0	0
					Percent	0.0%	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%

Total On-Street Inventory	175	Total Occupancy	92	104	108	100	102	101	91
		Total Utilization	52.6%	59.4%	61.7%	57.1%	58.3%	57.7%	52.0%

> 85%
70% - 85%
55% - 70%
< 55%

Off-Street Parking Utilization

Parking Zone	Type	Inventory		10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
13	Regular	11	Total Occupancy	3	2	2	4	4	3	5
			Percent	**27.3%**	**18.2%**	**18.2%**	**36.4%**	**36.4%**	**27.3%**	**45.5%**
14	Regular	11	Total Occupancy	3	4	2	4	4	4	5
			Percent	**27.3%**	**36.4%**	**18.2%**	**36.4%**	**36.4%**	**36.4%**	**45.5%**
15	Regular	103		20	25	35	26	27	17	21
	Handicap	4		0	0	1	1	0	0	0
	Handicap Van	2		0	0	1	1	0	0	0
	Total Inventory	109	Total Occupancy	20	25	37	28	27	17	21
			Percent	**18.3%**	**22.9%**	**33.9%**	**25.7%**	**24.8%**	**15.6%**	**19.3%**
16	Regular	24		3	3	1	2	4	4	6
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	25	Total Occupancy	3	3	1	2	4	4	6
			Percent	**12.0%**	**12.0%**	**4.0%**	**8.0%**	**16.0%**	**16.0%**	**24.0%**
17	Regular	9		4	6	8	8	5	9	6
	Handicap	1		0	1	1	0	0	0	0
	Round Table	8		2	3	6	6	3	4	4
	Customer Only	2		1	1	2	2	2	1	1
	Patient/Customer	5		5	3	3	5	5	5	5
	Total Inventory	25	Total Occupancy	12	14	20	21	15	19	16
			Percent	**48.0%**	**56.0%**	**80.0%**	**84.0%**	**60.0%**	**76.0%**	**64.0%**
18	Regular	27		14	14	14	13	11	6	5
	Handicap	1		0	0	0	0	0	0	0
	Reserved for Pastor	1		0	0	1	1	0	0	0
	Total Inventory	29	Total Occupancy	14	14	15	14	11	6	5
			Percent	**48.3%**	**48.3%**	**51.7%**	**48.3%**	**37.9%**	**20.7%**	**17.2%**
19	Regular	34		19	22	19	21	19	25	23
	Handicap	1		0	0	0	0	0	0	0
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	36	Total Occupancy	19	22	19	21	19	25	23
			Percent	**52.8%**	**61.1%**	**52.8%**	**58.3%**	**52.8%**	**69.4%**	**63.9%**
20	Regular	15		10	10	8	5	7	9	4
	Handicap Van	1		1	0	0	0	0	0	0
	Total Inventory	16	Total Occupancy	11	10	8	5	7	9	4
			Percent	**68.8%**	**62.5%**	**50.0%**	**31.3%**	**43.8%**	**56.3%**	**25.0%**
21	Regular	33		9	7	16	6	7	7	8
	Handicap	1		0	0	0	0	0	0	0
	Handicap Van	1		0	1	0	0	0	0	1
	Total Inventory	35	Total Occupancy	9	8	16	6	7	7	9
			Percent	**25.7%**	**22.9%**	**45.7%**	**17.1%**	**20.0%**	**20.0%**	**25.7%**
22	Regular	10		1	1	2	1	1	1	0
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	11	Total Occupancy	1	1	2	1	1	1	0
			Percent	**9.1%**	**9.1%**	**18.2%**	**9.1%**	**9.1%**	**9.1%**	**0.0%**
23	Regular	2		1	2	1	0	1	2	1
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	3	Total Occupancy	1	2	1	0	1	2	1
			Percent	**33.3%**	**66.7%**	**33.3%**	**0.0%**	**33.3%**	**66.7%**	**33.3%**
24	Regular	69		15	19	22	22	28	30	28
	Handicap	2		0	1	0	0	1	0	0
	Handicap Van	2		0	1	0	0	0	1	1
	Total Inventory	73	Total Occupancy	15	21	22	22	29	31	29
			Percent	**20.5%**	**28.8%**	**30.1%**	**30.1%**	**39.7%**	**42.5%**	**39.7%**
25	Regular	117		32	36	31	45	36	43	43
	Handicap	3		0	0	1	1	0	1	0
	Handicap Van	3		0	1	0	0	0	0	1
	Total Inventory	123	Total Occupancy	32	37	32	46	36	44	44
			Percent	**26.0%**	**30.1%**	**26.0%**	**37.4%**	**29.3%**	**35.8%**	**35.8%**
26	Regular	5	Total Occupancy	0	0	0	0	0	0	0
			Percent	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
27	Unmarked Spaces	(1)		0	0	0	1	1	1	1

Off-Street Parking Utilization

Parking Zone	Type	Inventory		10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
28	Regular	49		23	24	24	24	24	22	21
	Handicap	1		0	0	0	0	0	0	0
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	51	Total Occupancy	23	24	24	24	24	22	21
			Percent	45.1%	47.1%	47.1%	47.1%	47.1%	43.1%	41.2%
29	Regular	16	Total Occupancy	14	15	15	16	14	15	13
			Percent	87.5%	93.8%	93.8%	100.0%	87.5%	93.8%	81.3%
30	Regular	54	Total Occupancy	5	6	6	6	6	5	5
			Percent	9.3%	11.1%	11.1%	11.1%	11.1%	9.3%	9.3%
31	Regular	89		40	48	45	38	26	23	27
	Handicap	8		1	2	3	4	3	3	2
	Veteran Parking	1		0	1	0	0	1	1	0
	Family Parking	1		1	0	0	1	1	1	1
	15 Min (Green)	10		2	1	3	2	4	3	3
	Total Inventory	109	Total Occupancy	44	52	51	45	35	31	33
			Percent	40.4%	47.7%	46.8%	41.3%	32.1%	28.4%	30.3%
32	Regular	10		2	3	4	4	5	5	4
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	11	Total Occupancy	2	3	4	4	5	5	4
			Percent	18.2%	27.3%	36.4%	36.4%	45.5%	45.5%	36.4%
33	Regular	130		43	55	68	71	85	75	61
	Handicap	3		0	0	0	2	3	2	1
	Handicap Van	1		0	0	0	1	1	0	0
	Total Inventory	134	Total Occupancy	43	55	68	74	89	77	62
			Percent	32.1%	41.0%	50.7%	55.2%	66.4%	57.5%	46.3%
34	Regular	20	Total Occupancy	10	11	11	10	10	10	8
			Percent	50.0%	55.0%	55.0%	50.0%	50.0%	50.0%	40.0%
35	Regular	59		21	27	31	33	35	32	24
	Handicap	5		1	2	2	3	3	2	2
	Handicap Van	1		0	1	1	0	0	0	0
	Total Inventory	65	Total Occupancy	22	30	34	36	38	34	26
			Percent	33.8%	46.2%	52.3%	55.4%	58.5%	52.3%	40.0%
36	Regular	109		47	58	59	62	64	61	53
	Handicap	1		0	0	1	0	0	0	0
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	111	Total Occupancy	47	58	60	62	64	61	53
			Percent	42.3%	52.3%	54.1%	55.9%	57.7%	55.0%	47.7%
37	Regular	4		1	2	2	1	2	2	1
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	5	Total Occupancy	1	2	2	1	2	2	1
			Percent	20.0%	40.0%	40.0%	20.0%	40.0%	40.0%	20.0%
38	Regular	2		2	1	1	2	2	2	1
	Unmarked Spaces	(2)		3	4	4	4	5	4	4
	Total Inventory	2	Total Occupancy	5	5	5	6	7	6	5
			Percent	250.0%	250.0%	250.0%	300.0%	350.0%	300.0%	250.0%
39	Regular	35		6	8	10	12	14	15	13
	Handicap	1		0	0	1	0	0	0	0
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	37	Total Occupancy	6	8	11	12	14	15	13
			Percent	16.2%	21.6%	29.7%	32.4%	37.8%	40.5%	35.1%
40	Regular	50	Total Occupancy	7	7	7	6	7	7	6
			Percent	14.0%	14.0%	14.0%	12.0%	14.0%	14.0%	12.0%
41	Regular	118		36	45	49	51	42	38	39
	Handicap	7		0	0	0	1	1	2	1
	20 Min (Green)	45		16	23	25	28	29	29	26
	Total Inventory	170	Total Occupancy	52	68	74	80	72	69	66
			Percent	30.6%	40.0%	43.5%	47.1%	42.4%	40.6%	38.8%
42	Regular	8	Total Occupancy	3	4	4	4	5	5	4
			Percent	37.5%	50.0%	50.0%	50.0%	62.5%	62.5%	50.0%
43	Regular	31		8	10	9	7	6	6	7
	Handicap	1		0	0	0	1	1	0	0
	Total Inventory	32	Total Occupancy	8	10	9	8	7	6	7
			Percent	25.0%	31.3%	28.1%	25.0%	21.9%	18.8%	21.9%

Off-Street Parking Utilization

Parking Zone	Type	Inventory		10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
44	Regular	22		7	10	9	6	5	7	6
	Handicap	2		0	0	0	1	2	1	1
	Handicap Van	1		0	0	0	1	0	0	0
	Total Inventory	25	Total Occupancy	7	10	9	8	7	8	7
			Percent	28.0%	40.0%	36.0%	32.0%	28.0%	32.0%	28.0%
45	Regular	15		3	4	9	12	15	14	11
	Handicap	2		0	0	0	1	0	0	0
	Handicap Van	1		0	0	0	1	1	1	0
	La Posas	6		3	4	4	5	6	6	5
	Pawn Shop (Green)	4		0	0	0	0	0	0	0
	Total Inventory	28	Total Occupancy	6	8	13	19	22	21	16
			Percent	21.4%	28.6%	46.4%	67.9%	78.6%	75.0%	57.1%
46	Regular	8		0	0	2	4	4	4	3
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	9	Total Occupancy	0	0	2	4	4	4	3
			Percent	0.0%	0.0%	22.2%	44.4%	44.4%	44.4%	33.3%
47	Regular	13		1	2	4	5	7	6	6
	Handicap	1		0	0	1	0	0	0	0
	Total Inventory	14	Total Occupancy	1	2	5	5	7	6	6
			Percent	7.1%	14.3%	35.7%	35.7%	50.0%	42.9%	42.9%
048	Regular	16		5	6	8	10	11	13	10
	Handicap	1		0	0	0	1	1	1	0
	Customer Only	9		1	2	3	5	7	5	4
	Unmarked Spaces			1	1	1	1	1	0	0
	Total Inventory	26	Total Occupancy	7	9	12	17	20	19	14
			Percent	26.9%	34.6%	46.2%	65.4%	76.9%	73.1%	53.8%
49	Regular	11		11	11	10	11	11	10	9
	Unmarked Spaces			2	3	2	2	5	4	3
	Total Inventory	11	Total Occupancy	13	14	12	13	16	14	12
			Percent	118.2%	127.3%	109.1%	118.2%	145.5%	127.3%	109.1%
50	Regular	14	Total Occupancy	3	3	4	3	5	4	4
			Percent	21.4%	21.4%	28.6%	21.4%	35.7%	28.6%	28.6%
51	Regular	4	Total Occupancy	1	1	1	1	2	2	1
			Percent	25.0%	25.0%	25.0%	25.0%	50.0%	50.0%	25.0%
52	Regular	13		10	10	11	9	11	10	9
	Handicap	1		0	0	0	0	0	0	0
	Dental	6		2	2	3	1	2	2	1
	Total Inventory	20	Total Occupancy	12	12	14	10	13	12	10
			Percent	60.0%	60.0%	70.0%	50.0%	65.0%	60.0%	50.0%
53	Regular	10	Total Occupancy	4	5	5	3	4	3	3
			Percent	40.0%	50.0%	50.0%	30.0%	40.0%	30.0%	30.0%
54	Regular	6		4	4	3	2	3	2	2
	Handicap	1		0	0	0	0	0	0	0
	Total Inventory	7	Total Occupancy	4	4	3	2	3	2	2
			Percent	57.1%	57.1%	42.9%	28.6%	42.9%	28.6%	28.6%
55	Regular	14		3	5	5	5	5	3	4
	Handicap	1		0	0	0	0	0	0	0
	Total Inventory	15	Total Occupancy	3	5	5	5	5	3	4
			Percent	20.0%	33.3%	33.3%	33.3%	33.3%	20.0%	26.7%
56	Regular	8		6	8	8	8	8	8	8
	Handicap	1		1	1	1	1	1	1	1
	Total Inventory	9	Total Occupancy	7	9	9	9	9	9	9
			Percent	77.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
57	Regular	6		0	0	0	0	0	0	0
	Handicap	1		0	0	0	0	0	0	0
	Total Inventory	7	Total Occupancy	0	0	0	0	0	0	0
			Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
58	Regular	17		8	10	15	10	10	7	5
	Handicap	1		0	0	0	0	0	0	0
	Total Inventory	18	Total Occupancy	8	10	15	10	10	7	5
			Percent	44.4%	55.6%	83.3%	55.6%	55.6%	38.9%	27.8%

Off-Street Parking Utilization

Parking Zone	Type	Inventory		10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
59	Regular	17		13	13	15	17	17	15	15
	Handicap	1		0	1	1	1	0	0	0
	Total Inventory	18	Total Occupancy	13	14	16	18	17	15	15
			Percent	72.2%	77.8%	88.9%	100.0%	94.4%	83.3%	83.3%
060 Dirt	Unmarked Spaces	(3)	Total Occupancy	0	0	0	0	0	0	0
			Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
61	Regular	4		2	2	2	2	2	2	1
	Handicap	1		0	0	0	0	0	0	0
	Total Inventory	5	Total Occupancy	2	2	2	2	2	2	1
			Percent	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	20.0%
62	Handicap	1		0	0	0	0	0	0	0
	Unmarked Spaces	(2)		5	5	4	4	5	4	4
	Total Inventory	1	Total Occupancy	5	5	4	4	5	4	4
			Percent	500.0%	500.0%	400.0%	400.0%	500.0%	400.0%	400.0%
063 Carwash	Unmarked Spaces	(4)	Total Occupancy	3	4	3	3	3	4	2
64	Regular	25		1	1	5	6	7	5	5
	Handicap	1		0	0	1	1	0	0	0
	Total Inventory	26	Total Occupancy	1	1	6	7	7	5	5
			Percent	3.8%	3.8%	23.1%	26.9%	26.9%	19.2%	19.2%
65	Regular	6	Total Occupancy	3	3	3	3	3	3	3
			Percent	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
66	Regular	17		11	13	14	14	13	15	11
	Handicap	1		0	0	0	0	0	0	0
	Total Inventory	18	Total Occupancy	11	13	14	14	13	15	11
			Percent	61.1%	72.2%	77.8%	77.8%	72.2%	83.3%	61.1%
67	Regular	16	Total Occupancy	1	2	2	2	3	2	3
			Percent	5.6%	11.1%	11.1%	11.1%	16.7%	11.1%	16.7%
68	Regular	13		2	4	0	2	0	0	0
	Handicap	1		0	0	0	0	0	0	0
	Handicap Van	1		0	0	0	0	0	0	0
	Total Inventory	15	Total Occupancy	2	4	0	2	0	0	0
			Percent	13.3%	26.7%	0.0%	13.3%	0.0%	0.0%	0.0%
69	Regular	8		8	8	8	7	7	8	6
	Handicap	1		1	1	1	0	0	0	0
	Total Inventory	9	Total Occupancy	9	9	9	7	7	8	6
			Percent	100.0%	100.0%	100.0%	77.8%	77.8%	88.9%	66.7%
70	Regular	23		23	23	21	23	20	21	19
	Handicap	1		1	1	1	1	0	0	0
	Reserved	2		1	1	0	1	1	1	0
	Unmarked Spaces	(2)		2	2	1	1	2	0	0
	Total Inventory	26	Total Occupancy	27	27	23	26	23	22	19
			Percent	103.8%	103.8%	88.5%	100.0%	88.5%	84.6%	73.1%
71	Regular	21		8	10	13	13	15	15	16
	Handicap	1		0	0	0	0	0	0	0
	Total Inventory	22	Total Occupancy	8	10	13	13	15	15	16
			Percent	36.4%	45.5%	59.1%	59.1%	68.2%	68.2%	72.7%
72	Regular	26		7	10	13	11	12	13	11
	Handicap	1		1	1	0	0	0	0	0
	Handicap Van	1		1	1	0	0	0	0	0
	Total Inventory	28	Total Occupancy	9	12	13	11	12	13	11
			Percent	32.1%	42.9%	46.4%	39.3%	42.9%	46.4%	39.3%

Total Off-Street Inventory		1794	Total Occupancy	602	715	776	786	798	760	685
			Total Utilization	33.6%	39.9%	43.3%	43.8%	44.5%	42.4%	38.2%

NOTES:

(1) Car Self-Wash Vacuum Stations - Not included in parking analysis

(2) Auto Repair. Vehicles temporarily stored in unmarked spaces

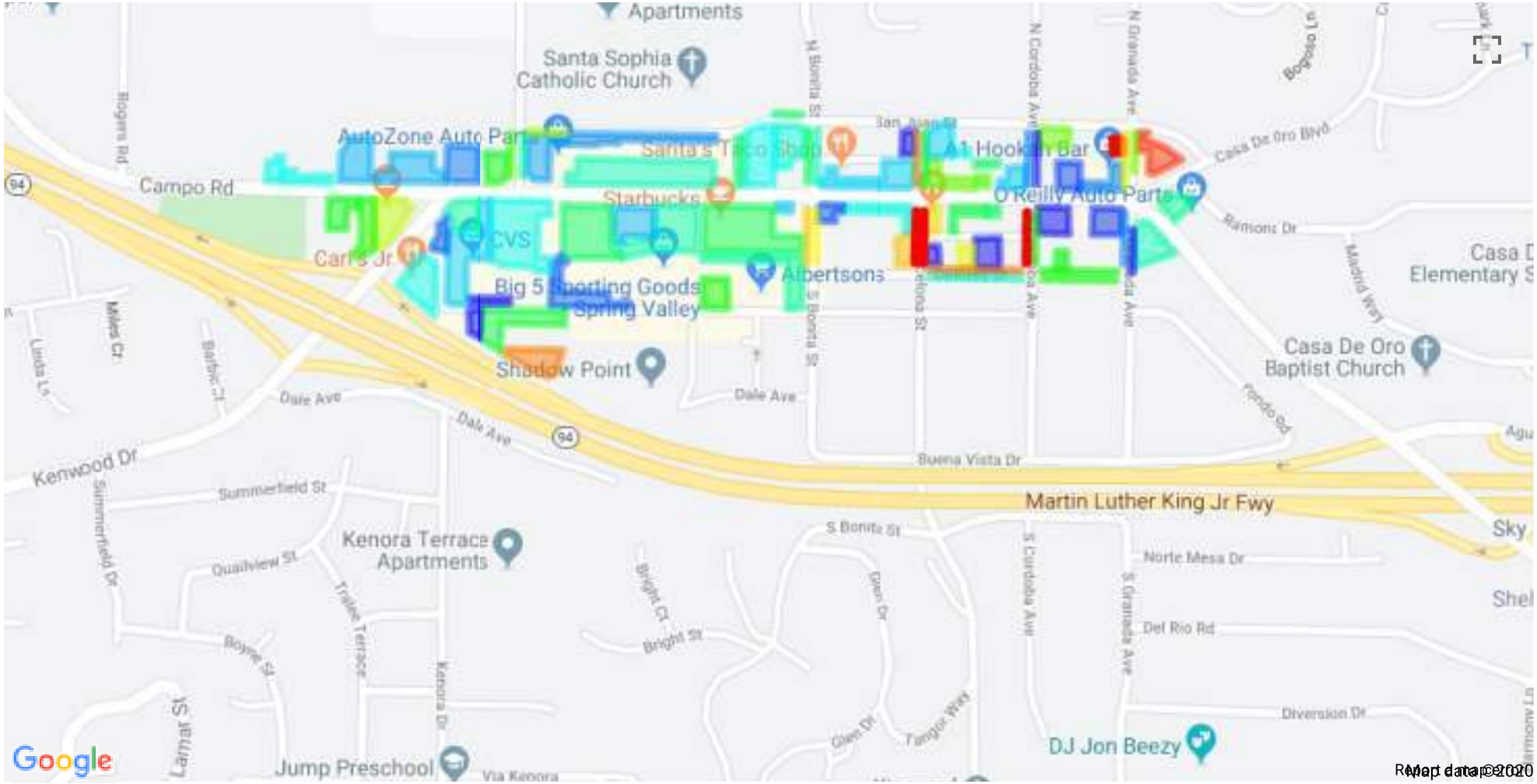
(3) Spring Valley Vetinary Clinic overflow parking

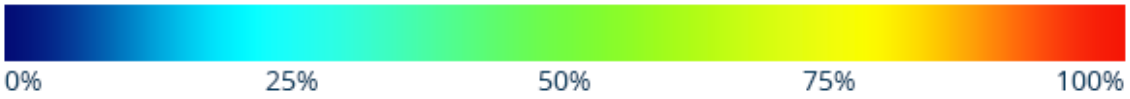
(4) Car Wash - Not included in parking analysis

	> 85%
	70% - 85%
	55% - 70%
	< 55%

19-4471 Casa Del Oro

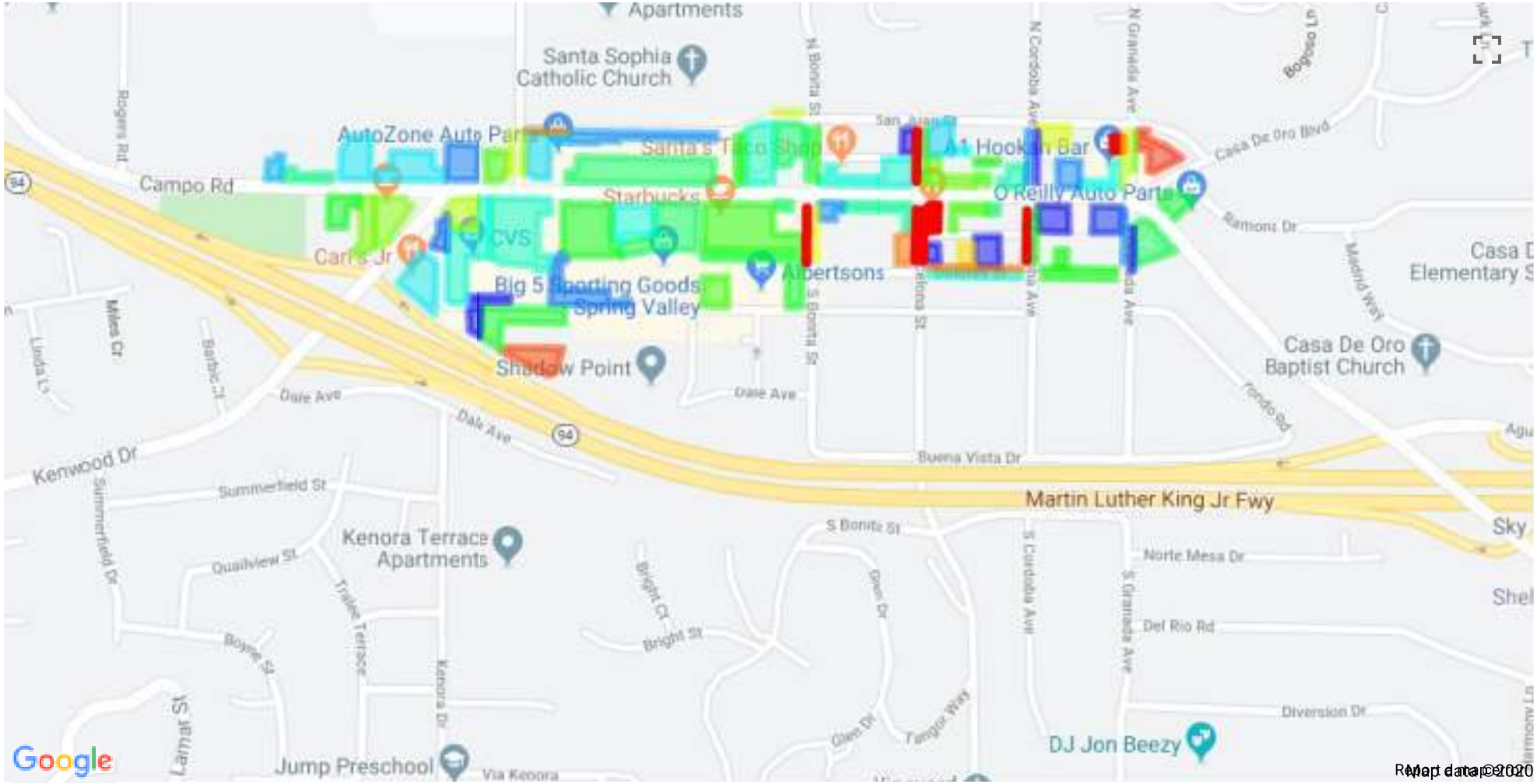
Date: 13-Dec
Time: 10:00 AM

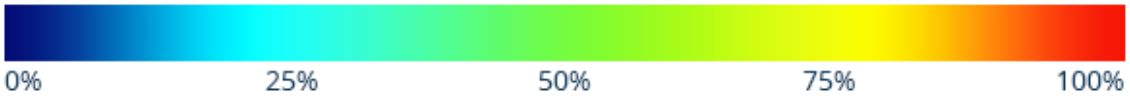




19-4471 Casa Del Oro

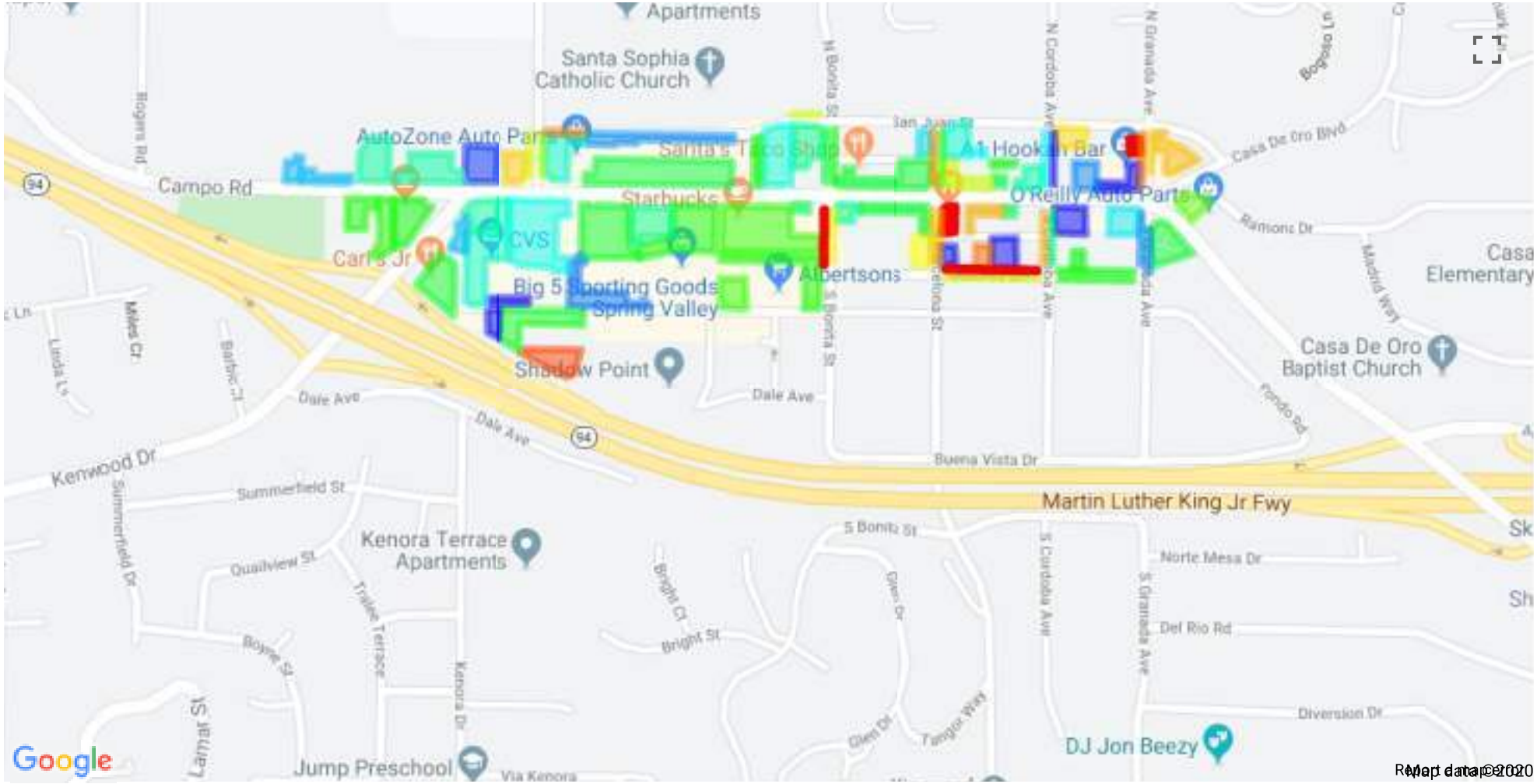
Date: 13-Dec
Time: 11:00 AM

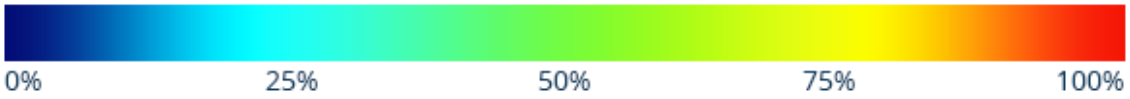




19-4471 Casa Del Oro

Date: 13-Dec
Time: 12:00 PM





19-4471 Casa Del Oro

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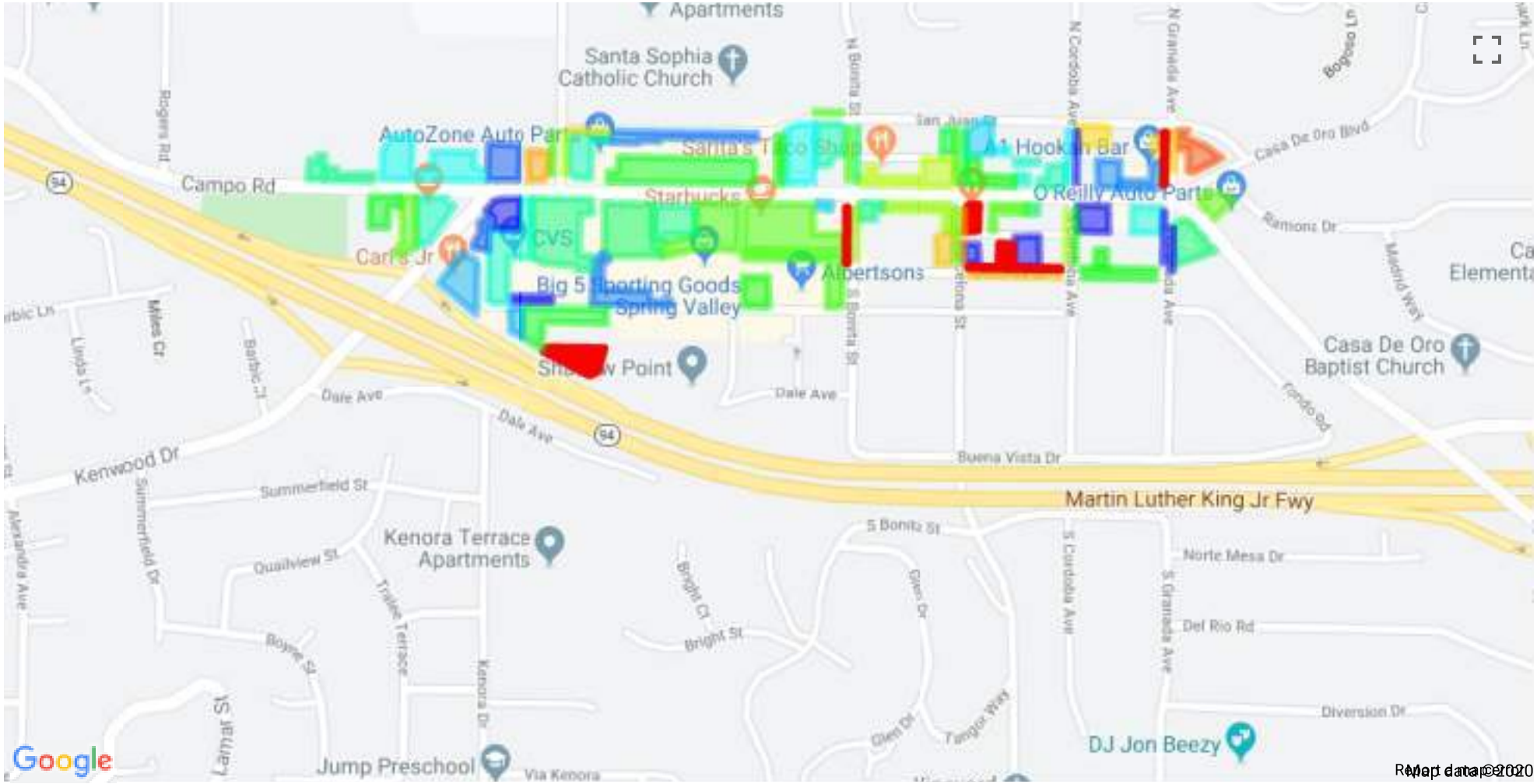
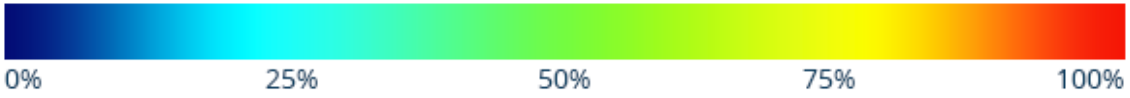
Time: 1:00 PM





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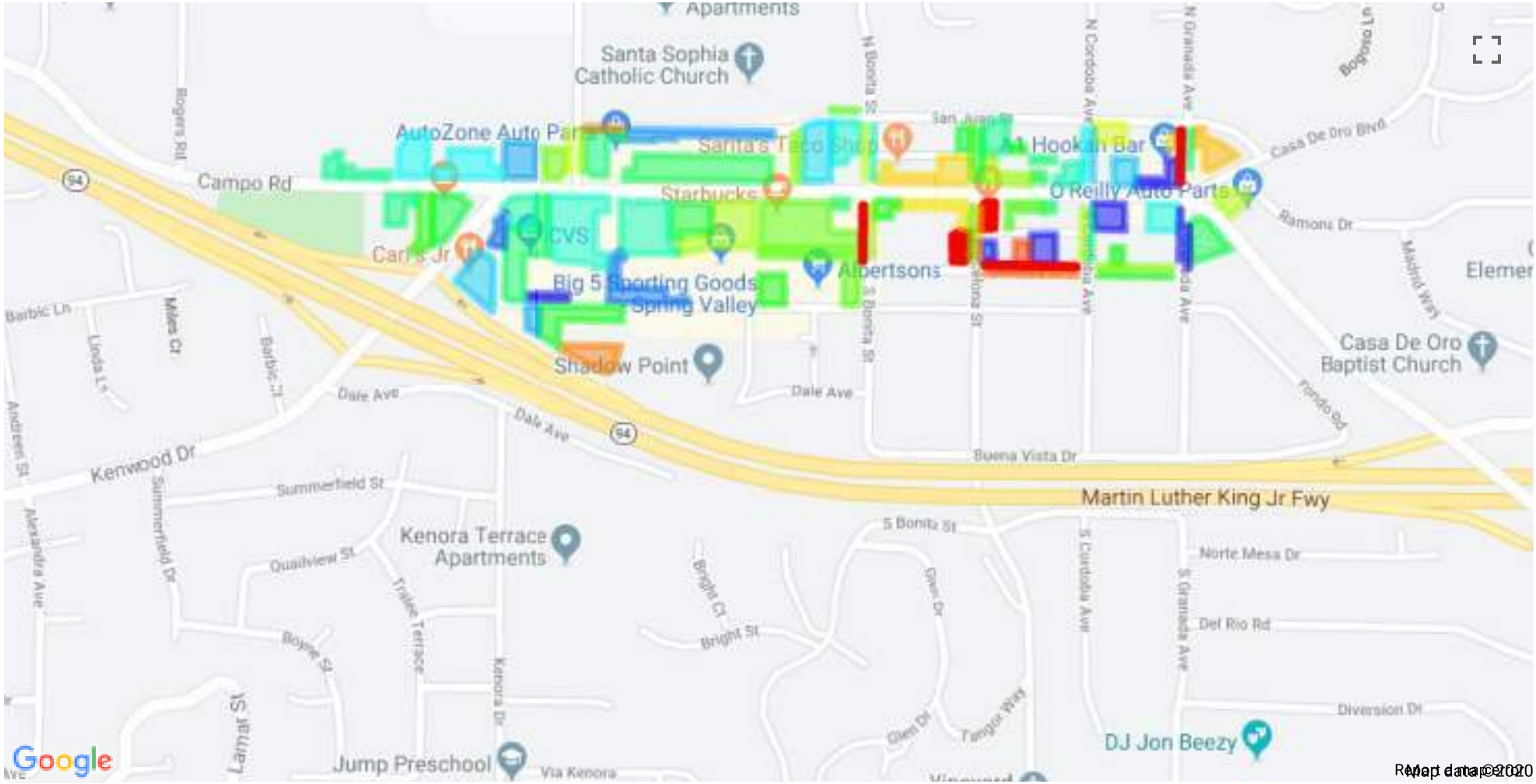

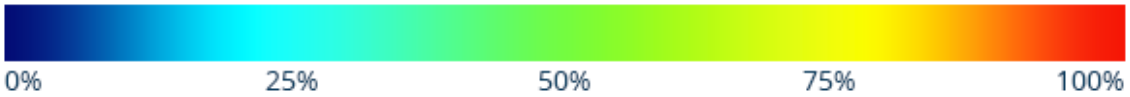

19-4471 Casa Del Oro

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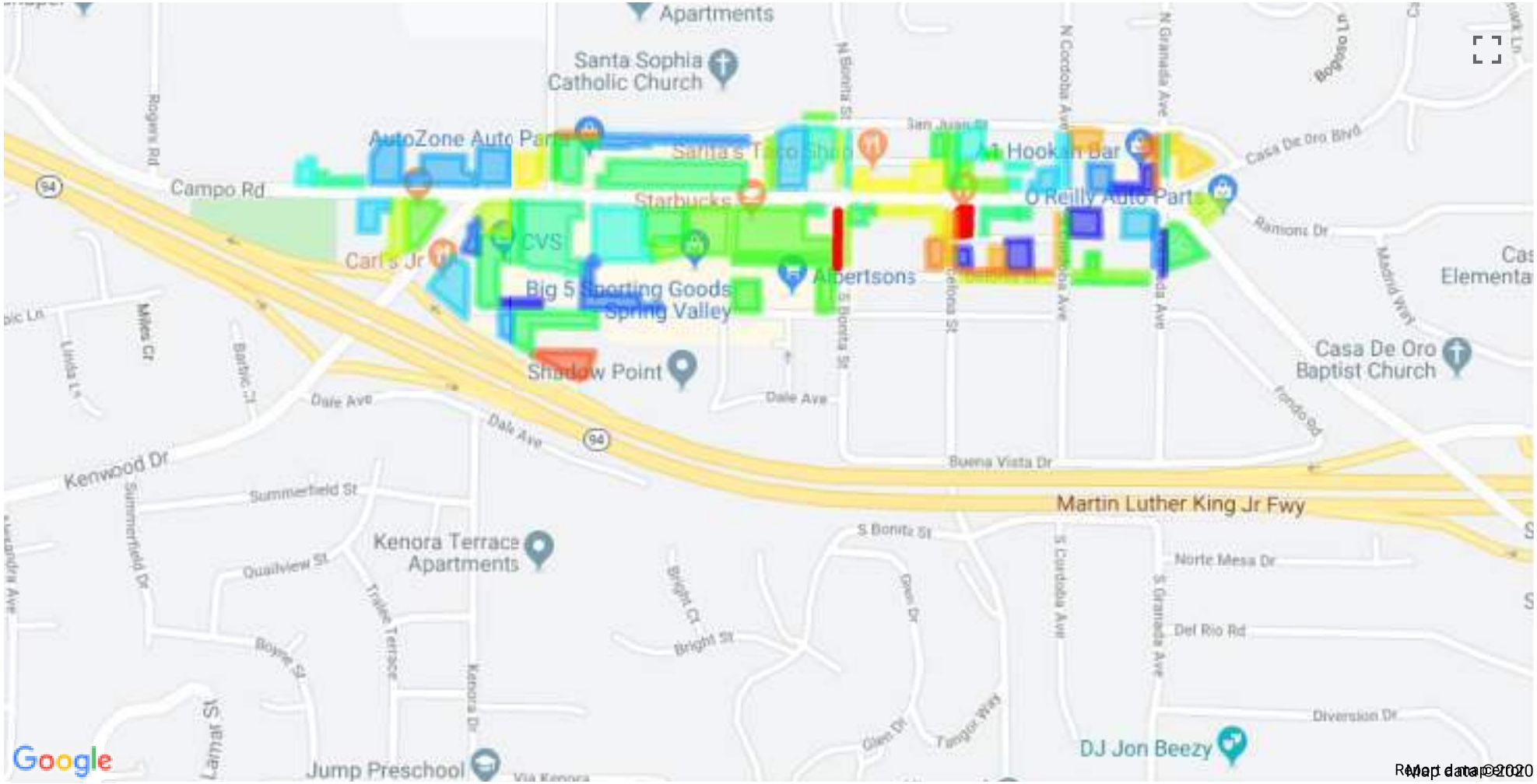
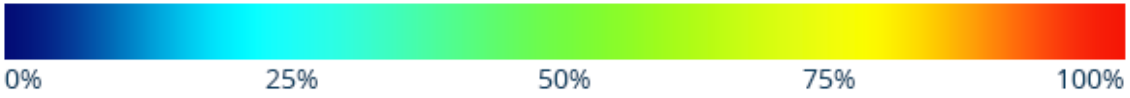
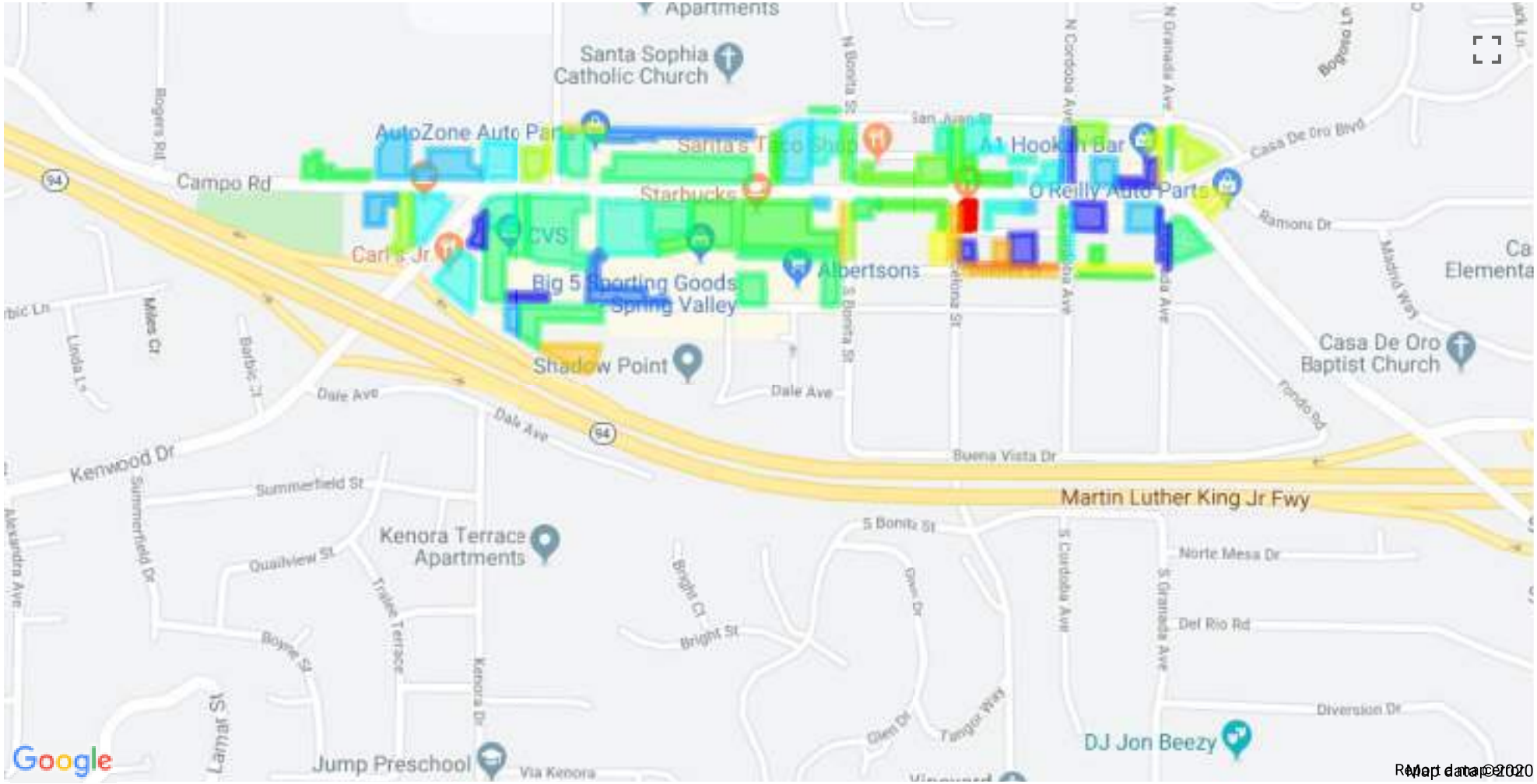
Time: 3:00 PM

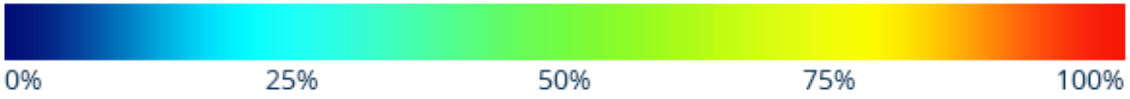




19-4471 Casa Del Oro

Date: 13-Dec
Time: 4:00 PM





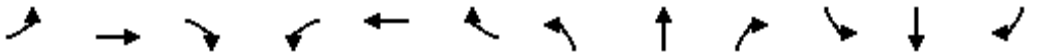
Michael Baker
INTERNATIONAL

Attachment G: Horizon Year 2035 With Project HCM Worksheets

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	209	85	848	596	236	648
Future Volume (vph)	209	85	848	596	236	648
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	4.0	4.1	4.1	4.4	4.1
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	2787
Peak-hour factor, PHF	0.83	0.83	0.91	0.91	0.89	0.89
Adj. Flow (vph)	252	102	932	655	265	728
RTOR Reduction (vph)	0	0	0	0	0	235
Lane Group Flow (vph)	252	102	932	655	265	493
Turn Type	NA	Free	Split	NA	Prot	pm+ov
Protected Phases	6		5	5	3	5
Permitted Phases		Free				3
Actuated Green, G (s)	18.7	100.0	50.6	50.6	17.1	67.7
Effective Green, g (s)	18.7	100.0	50.6	50.6	17.1	67.7
Actuated g/C Ratio	0.19	1.00	0.51	0.51	0.17	0.68
Clearance Time (s)	5.1		4.1	4.1	4.4	4.1
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	661	1583	1737	942	302	2001
v/s Ratio Prot	c0.07		0.27	c0.35	c0.15	0.12
v/s Ratio Perm		0.06				0.05
v/c Ratio	0.38	0.06	0.54	0.70	0.88	0.25
Uniform Delay, d1	35.6	0.0	16.7	18.8	40.4	6.3
Progression Factor	1.00	1.00	0.69	0.71	1.00	1.00
Incremental Delay, d2	1.7	0.1	0.1	1.2	23.1	0.0
Delay (s)	37.3	0.1	11.7	14.5	63.5	6.3
Level of Service	D	A	B	B	E	A
Approach Delay (s)	26.5			12.9	21.5	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	259	527	49	28	1035	128	26	7	12	168	21	436
Future Volume (vph)	259	527	49	28	1035	128	26	7	12	168	21	436
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	5.1		5.1	5.1		5.1	5.1			5.8	4.1
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.91			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	1836		1770	3476		1770	1690			1783	1583
Flt Permitted	0.95	1.00		0.36	1.00		0.24	1.00			0.73	1.00
Satd. Flow (perm)	1770	1836		664	3476		443	1690			1368	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.92	0.92	0.92	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	316	643	60	30	1125	139	28	8	13	195	24	507
RTOR Reduction (vph)	0	4	0	0	9	0	0	7	0	0	0	78
Lane Group Flow (vph)	316	699	0	30	1255	0	28	14	0	0	219	429
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA		Perm	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	1!	8!			2!			4!			7!	1
Permitted Phases				2!			4!			7!		7
Actuated Green, G (s)	20.6	46.5		43.4	43.4		43.3	43.3			21.0	41.6
Effective Green, g (s)	20.6	46.5		43.4	43.4		43.3	43.3			21.0	41.6
Actuated g/C Ratio	0.21	0.46		0.43	0.43		0.43	0.43			0.21	0.42
Clearance Time (s)	4.1	5.1		5.1	5.1		5.1	5.1			5.8	4.1
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	364	853		288	1508		191	731			287	658
v/s Ratio Prot	c0.18	c0.38			c0.36			0.01				0.13
v/s Ratio Perm				0.05			0.06				c0.16	0.14
v/c Ratio	0.87	0.82		0.10	0.83		0.15	0.02			0.76	0.65
Uniform Delay, d1	38.4	23.1		16.8	25.1		17.2	16.2			37.2	23.4
Progression Factor	1.24	0.73		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	18.2	5.7		0.7	5.5		0.1	0.0			10.3	1.8
Delay (s)	65.7	22.7		17.5	30.6		17.3	16.2			47.5	25.2
Level of Service	E	C		B	C		B	B			D	C
Approach Delay (s)		36.0			30.3			16.8			31.9	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

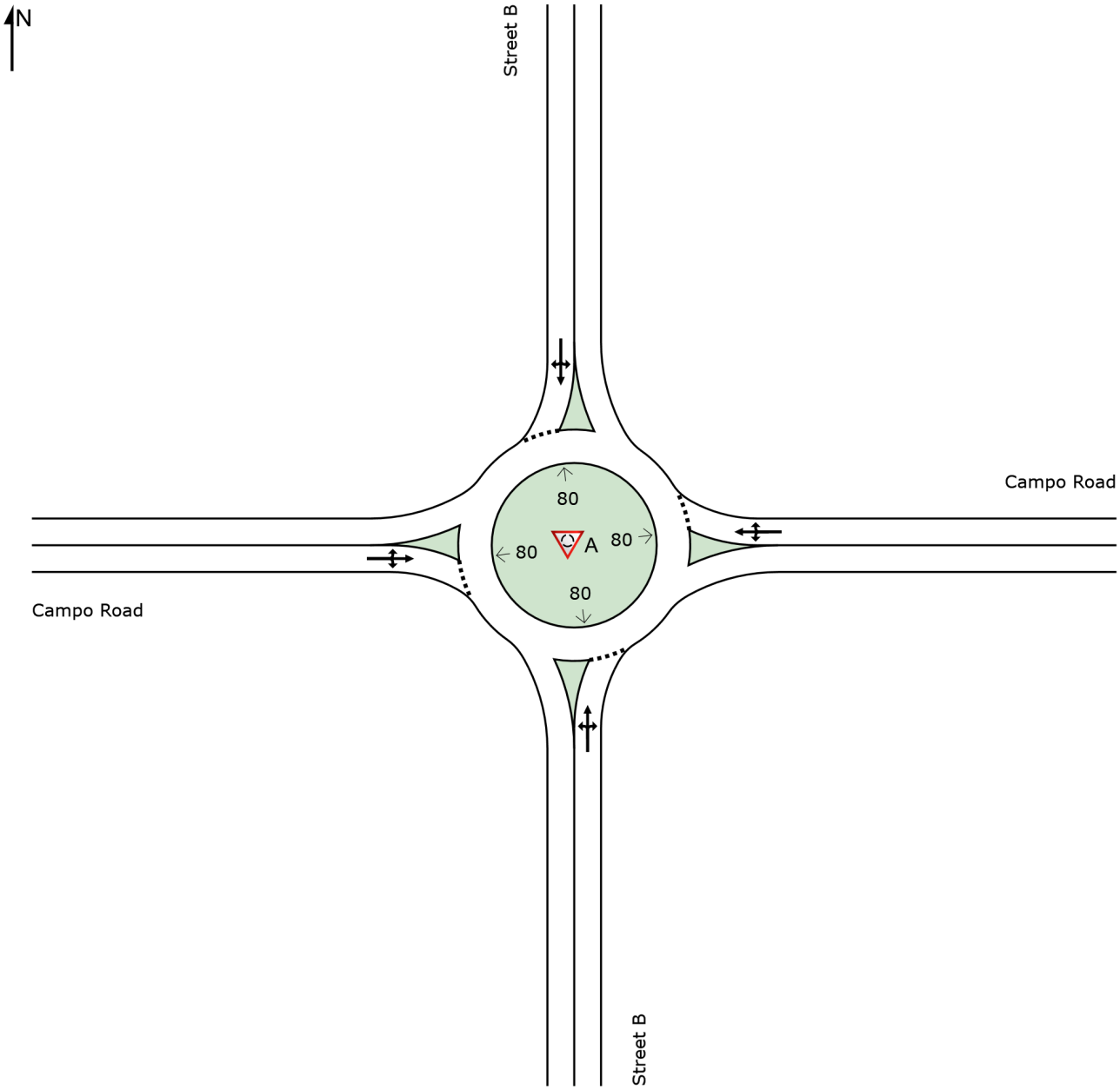
! Phase conflict between lane groups.
c Critical Lane Group

SITE LAYOUT

Site: A [Int. A (Site Folder: General)]

Campo Road / Street B
Site Category: HY 2035+P AM
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: A [Int. A (Site Folder: General)]

Campo Road / Street B
Site Category: HY 2035+P AM
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Street B														
3	L2	41	2.0	48	2.0	0.111	7.9	LOS A	0.4	10.5	0.64	0.64	0.64	31.4
8	T1	1	2.0	1	2.0	0.111	7.9	LOS A	0.4	10.5	0.64	0.64	0.64	31.4
18	R2	10	2.0	12	2.0	0.111	7.9	LOS A	0.4	10.5	0.64	0.64	0.64	30.7
Approach		52	2.0	61	2.0	0.111	7.9	LOS A	0.4	10.5	0.64	0.64	0.64	31.2
East: Campo Road														
1	L2	16	2.0	19	2.0	1.138	88.6	LOS F	157.0	3988.4	1.00	1.53	2.58	15.2
6	T1	1176	2.0	1384	2.0	1.138	88.6	LOS F	157.0	3988.4	1.00	1.53	2.58	15.2
16	R2	8	2.0	9	2.0	1.138	88.6	LOS F	157.0	3988.4	1.00	1.53	2.58	15.0
Approach		1200	2.0	1412	2.0	1.138	88.6	LOS F	157.0	3988.4	1.00	1.53	2.58	15.2
North: Street B														
7	L2	5	2.0	6	2.0	0.073	11.2	LOS B	0.2	6.3	0.75	0.75	0.75	31.0
4	T1	1	2.0	1	2.0	0.073	11.2	LOS B	0.2	6.3	0.75	0.75	0.75	31.1
14	R2	16	2.0	19	2.0	0.073	11.2	LOS B	0.2	6.3	0.75	0.75	0.75	30.4
Approach		22	2.0	26	2.0	0.073	11.2	LOS B	0.2	6.3	0.75	0.75	0.75	30.6
West: Campo Road														
5	L2	23	2.0	27	2.0	0.702	12.5	LOS B	8.6	217.8	0.29	0.09	0.29	31.0
2	T1	697	2.0	820	2.0	0.702	12.5	LOS B	8.6	217.8	0.29	0.09	0.29	31.1
12	R2	62	2.0	73	2.0	0.702	12.5	LOS B	8.6	217.8	0.29	0.09	0.29	30.3
Approach		782	2.0	920	2.0	0.702	12.5	LOS B	8.6	217.8	0.29	0.09	0.29	31.0
All Vehicles		2056	2.0	2419	2.0	1.138	56.8	LOS F	157.0	3988.4	0.72	0.96	1.64	19.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	610	47	16	1276	8	0	0	17	0	0	21
Future Vol, veh/h	23	610	47	16	1276	8	0	0	17	0	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	663	51	17	1387	9	0	0	18	0	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1396	0	0	714	0	0	-	-	689	-	-	1392
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	490	-	-	886	-	-	0	0	446	0	0	174
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	490	-	-	886	-	-	-	-	446	-	-	174
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	13.4	28.8
HCM LOS			B	D

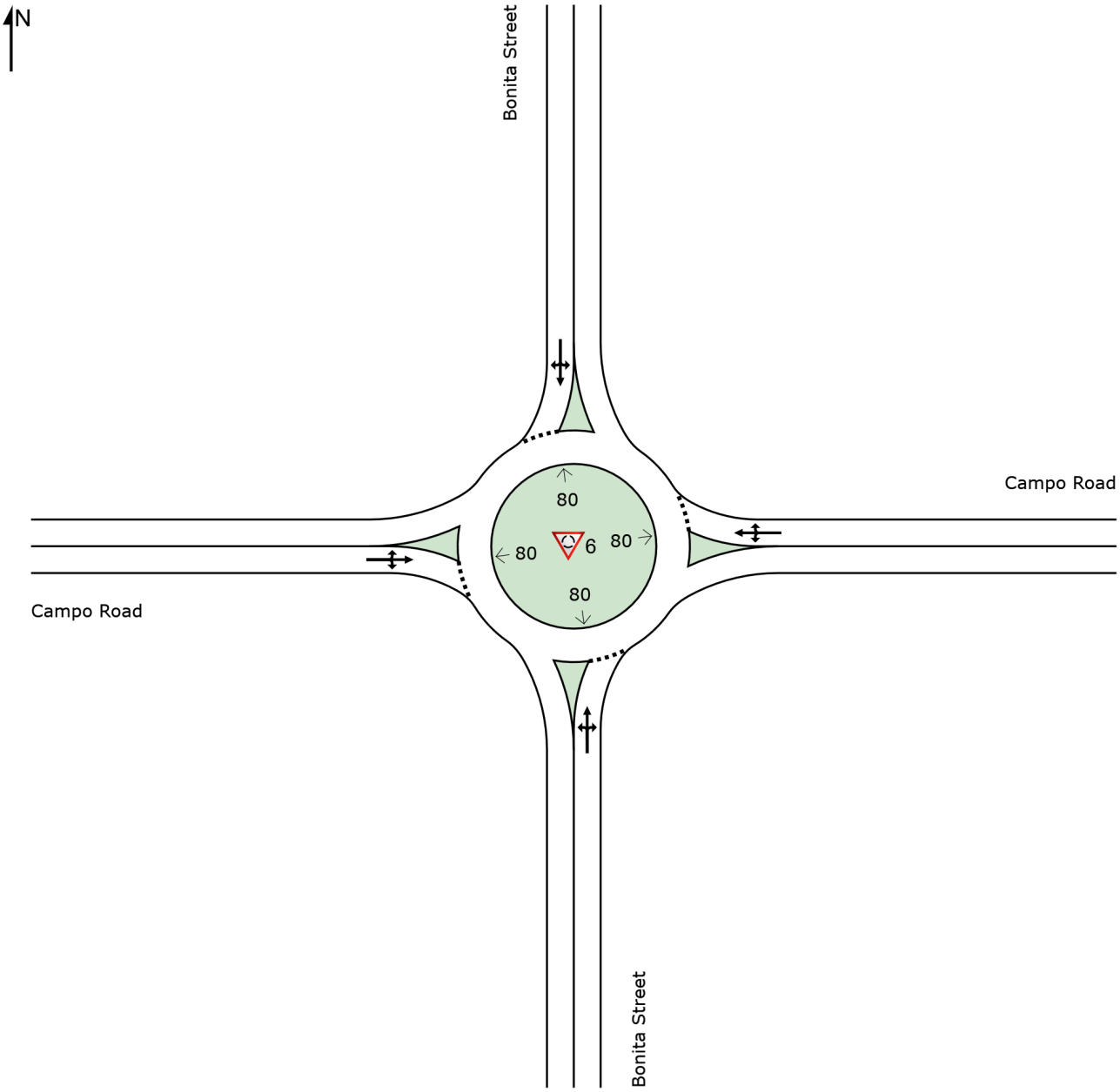
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	446	490	-	-	886	-	-	174
HCM Lane V/C Ratio	0.041	0.051	-	-	0.02	-	-	0.131
HCM Control Delay (s)	13.4	12.7	-	-	9.1	-	-	28.8
HCM Lane LOS	B	B	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-	-	0.4

SITE LAYOUT

Site: 6 [Int. 6 (Site Folder: General)]

Campo Road / Bonita Street
Site Category: HY 2035+P AM
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 6 [Int. 6 (Site Folder: General)]

Campo Road / Bonita Street
Site Category: HY 2035+P AM
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Bonita Street														
3	L2	79	2.0	104	2.0	0.287	9.5	LOS A	1.2	30.5	0.67	0.67	0.67	31.1
8	T1	23	2.0	30	2.0	0.287	9.5	LOS A	1.2	30.5	0.67	0.67	0.67	31.2
18	R2	35	2.0	46	2.0	0.287	9.5	LOS A	1.2	30.5	0.67	0.67	0.67	30.4
Approach		137	2.0	180	2.0	0.287	9.5	LOS A	1.2	30.5	0.67	0.67	0.67	30.9
East: Campo Road														
1	L2	33	2.0	41	2.0	1.452	221.7	LOS F	211.1	5360.7	1.00	4.30	7.65	8.0
6	T1	1128	2.0	1410	2.0	1.452	221.7	LOS F	211.1	5360.7	1.00	4.30	7.65	8.0
16	R2	106	2.0	133	2.0	1.452	221.7	LOS F	211.1	5360.7	1.00	4.30	7.65	8.0
Approach		1267	2.0	1584	2.0	1.452	221.7	LOS F	211.1	5360.7	1.00	4.30	7.65	8.0
North: Bonita Street														
7	L2	52	2.0	69	2.0	0.422	16.5	LOS C	1.9	49.3	0.79	0.87	1.10	28.7
4	T1	14	2.0	19	2.0	0.422	16.5	LOS C	1.9	49.3	0.79	0.87	1.10	28.7
14	R2	69	2.0	92	2.0	0.422	16.5	LOS C	1.9	49.3	0.79	0.87	1.10	28.1
Approach		135	2.0	180	2.0	0.422	16.5	LOS C	1.9	49.3	0.79	0.87	1.10	28.4
West: Campo Road														
5	L2	57	2.0	66	2.0	0.595	10.4	LOS B	4.9	124.6	0.50	0.30	0.50	31.8
2	T1	519	2.0	597	2.0	0.595	10.4	LOS B	4.9	124.6	0.50	0.30	0.50	31.8
12	R2	40	2.0	46	2.0	0.595	10.4	LOS B	4.9	124.6	0.50	0.30	0.50	31.1
Approach		616	2.0	708	2.0	0.595	10.4	LOS B	4.9	124.6	0.50	0.30	0.50	31.8
All Vehicles		2155	2.0	2652	2.0	1.452	136.9	LOS F	211.1	5360.7	0.83	2.75	4.82	11.4

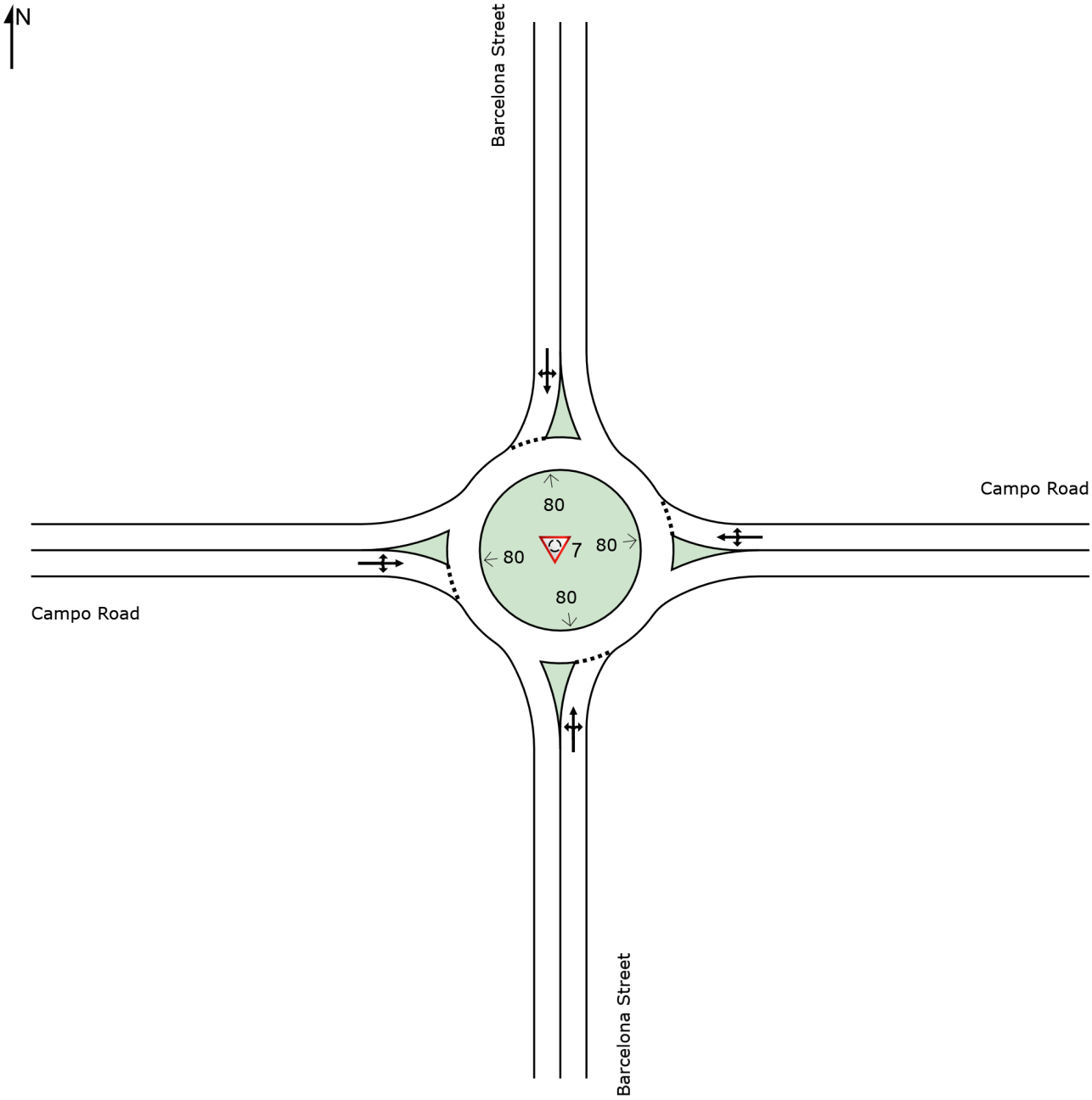
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 7 [Int. 7 (Site Folder: General)]

Campo Road / Barcelona Street
Site Category: HY 2035+P AM
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 7 [Int. 7 (Site Folder: General)]

Campo Road / Barcelona Street
Site Category: HY 2035+P AM
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Barcelona Street														
3	L2	334	2.0	407	2.0	0.690	17.8	LOS C	7.6	193.1	0.84	1.11	1.58	27.6
8	T1	38	2.0	46	2.0	0.690	17.8	LOS C	7.6	193.1	0.84	1.11	1.58	27.7
18	R2	65	2.0	79	2.0	0.690	17.8	LOS C	7.6	193.1	0.84	1.11	1.58	27.1
Approach		437	2.0	533	2.0	0.690	17.8	LOS C	7.6	193.1	0.84	1.11	1.58	27.6
East: Campo Road														
1	L2	66	2.0	85	2.0	1.592	286.9	LOS F	176.8	4490.9	1.00	5.66	13.26	6.5
6	T1	914	2.0	1172	2.0	1.592	286.9	LOS F	176.8	4490.9	1.00	5.66	13.26	6.5
16	R2	40	2.0	51	2.0	1.592	286.9	LOS F	176.8	4490.9	1.00	5.66	13.26	6.5
Approach		1020	2.0	1308	2.0	1.592	286.9	LOS F	176.8	4490.9	1.00	5.66	13.26	6.5
North: Barcelona Street														
7	L2	23	2.0	29	2.0	0.192	12.4	LOS B	0.7	17.4	0.75	0.75	0.75	30.3
4	T1	14	2.0	18	2.0	0.192	12.4	LOS B	0.7	17.4	0.75	0.75	0.75	30.3
14	R2	21	2.0	27	2.0	0.192	12.4	LOS B	0.7	17.4	0.75	0.75	0.75	29.6
Approach		58	2.0	74	2.0	0.192	12.4	LOS B	0.7	17.4	0.75	0.75	0.75	30.0
West: Campo Road														
5	L2	15	2.0	19	2.0	0.602	10.4	LOS B	5.1	129.9	0.47	0.27	0.47	31.9
2	T1	392	2.0	484	2.0	0.602	10.4	LOS B	5.1	129.9	0.47	0.27	0.47	32.0
12	R2	182	2.0	225	2.0	0.602	10.4	LOS B	5.1	129.9	0.47	0.27	0.47	31.2
Approach		589	2.0	727	2.0	0.602	10.4	LOS B	5.1	129.9	0.47	0.27	0.47	31.7
All Vehicles		2104	2.0	2642	2.0	1.592	148.8	LOS F	176.8	4490.9	0.82	3.12	7.03	10.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	461	19	38	920	52	0	0	33	0	0	69
Future Vol, veh/h	37	461	19	38	920	52	0	0	33	0	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	501	21	41	1000	57	0	0	36	0	0	75

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1057	0	0	522	0	0	-	-	512	-	-	1029
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	659	-	-	1044	-	-	0	0	562	0	0	284
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	659	-	-	1044	-	-	-	-	562	-	-	284
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.3	11.8	22.2
HCM LOS			B	C

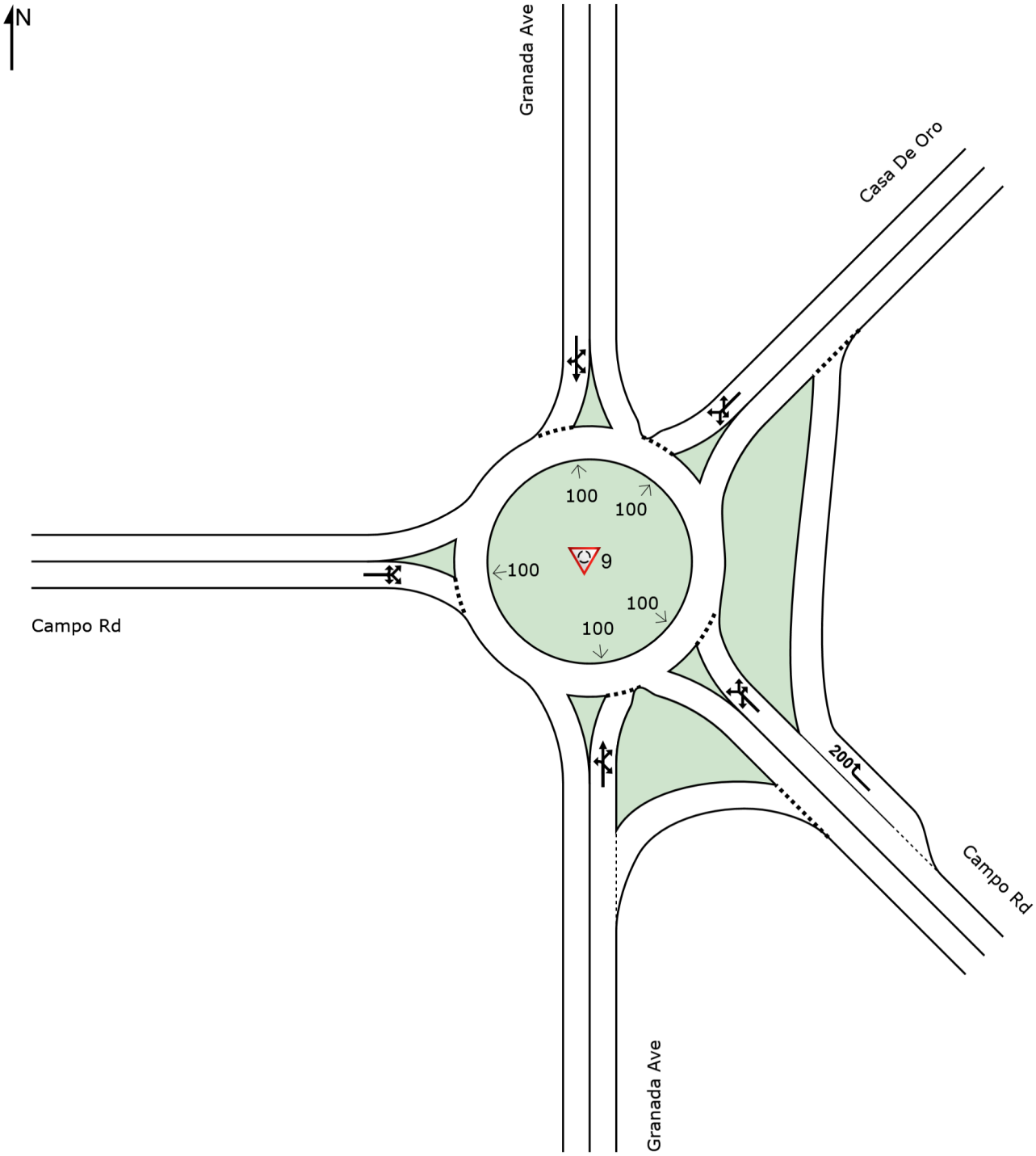
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	562	659	-	-	1044	-	-	284
HCM Lane V/C Ratio	0.064	0.061	-	-	0.04	-	-	0.264
HCM Control Delay (s)	11.8	10.8	-	-	8.6	-	-	22.2
HCM Lane LOS	B	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0.1	-	-	1

SITE LAYOUT

Site: 9 [Int 9 (Site Folder: General)]

Campo / Granada / CDO 1-Lane
Site Category: HY 2035+P AM
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 9 [Int 9 (Site Folder: General)]

Campo / Granada / CDO 1-Lane
Site Category: HY 2035+P AM
Roundabout

Vehicle Movement Performance

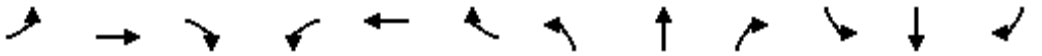
Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Granada Ave														
3	L2	27	2.0	35	2.0	0.318	10.5	LOS B	1.4	35.5	0.68	0.69	0.72	32.3
8	T1	1	2.0	1	2.0	0.318	10.5	LOS B	1.4	35.5	0.68	0.69	0.72	32.3
18a	R1	29	2.0	37	2.0	0.318	10.5	LOS B	1.4	35.5	0.68	0.69	0.72	32.0
18b	R3	100	2.0	128	2.0	0.318	9.6	LOS A	1.4	35.5	0.68	0.69	0.72	31.1
Approach		157	2.0	201	2.0	0.318	9.9	LOS A	1.4	35.5	0.68	0.69	0.72	31.5
SouthEast: Campo Rd														
3bx	L3	11	2.0	14	2.0	0.991	43.7	LOS E	60.1	1527.0	1.00	1.81	3.14	21.4
3ax	L1	812	2.0	1068	2.0	0.991	43.7	LOS E	60.1	1527.0	1.00	1.81	3.14	21.1
18ax	R1	30	2.0	39	2.0	0.991	43.7	LOS E	60.1	1527.0	1.00	1.81	3.14	21.1
18x	R2	58	2.0	76	2.0	0.062	3.5	LOS A	0.2	6.2	0.26	0.13	0.26	35.0
Approach		911	2.0	1199	2.0	0.991	41.2	LOS E	60.1	1527.0	0.95	1.70	2.96	21.6
NorthEast: Casa De Oro														
1x	L2	56	2.0	79	2.0	0.922	61.0	LOS F	10.3	260.7	0.96	1.58	3.19	18.7
1ax	L1	19	2.0	27	2.0	0.922	61.0	LOS F	10.3	260.7	0.96	1.58	3.19	18.5
16ax	R1	162	2.0	228	2.0	0.922	61.0	LOS F	10.3	260.7	0.96	1.58	3.19	18.6
16bx	R3	16	2.0	23	2.0	0.922	61.0	LOS F	10.3	260.7	0.96	1.58	3.19	18.2
Approach		253	2.0	356	2.0	0.922	61.0	LOS F	10.3	260.7	0.96	1.58	3.19	18.6
North: Granada Ave														
7b	L3	1	2.0	2	2.0	0.340	19.8	LOS C	1.3	33.0	0.84	0.90	1.06	27.9
7a	L1	46	2.0	70	2.0	0.340	19.8	LOS C	1.3	33.0	0.84	0.90	1.06	27.3
4	T1	3	2.0	5	2.0	0.340	19.8	LOS C	1.3	33.0	0.84	0.90	1.06	27.6
14	R2	17	2.0	26	2.0	0.340	19.8	LOS C	1.3	33.0	0.84	0.90	1.06	26.9
Approach		67	2.0	102	2.0	0.340	19.8	LOS C	1.3	33.0	0.84	0.90	1.06	27.3
West: Campo Rd														
5	L2	35	2.0	46	2.0	0.621	11.6	LOS B	5.7	144.0	0.64	0.50	0.69	31.7
5a	L1	77	2.0	101	2.0	0.621	11.6	LOS B	5.7	144.0	0.64	0.50	0.69	31.3
12a	R1	398	2.0	524	2.0	0.621	11.6	LOS B	5.7	144.0	0.64	0.50	0.69	31.4
12	R2	11	2.0	14	2.0	0.621	11.6	LOS B	5.7	144.0	0.64	0.50	0.69	30.8
Approach		521	2.0	686	2.0	0.621	11.6	LOS B	5.7	144.0	0.64	0.50	0.69	31.4
All Vehicles		1909	2.0	2543	2.0	0.991	32.6	LOS D	60.1	1527.0	0.84	1.25	2.12	23.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	403	124	638	220	119	706
Future Volume (vph)	403	124	638	220	119	706
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	4.0	4.1	4.1	4.4	4.1
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	2787
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.96	0.96
Adj. Flow (vph)	424	131	658	227	124	735
RTOR Reduction (vph)	0	0	0	0	0	273
Lane Group Flow (vph)	424	131	658	227	124	462
Turn Type	NA	Free	Split	NA	Prot	pm+ov
Protected Phases	6		5	5	3	5
Permitted Phases		Free				3
Actuated Green, G (s)	34.6	90.0	29.8	29.8	12.0	41.8
Effective Green, g (s)	34.6	90.0	29.8	29.8	12.0	41.8
Actuated g/C Ratio	0.38	1.00	0.33	0.33	0.13	0.46
Clearance Time (s)	5.1		4.1	4.1	4.4	4.1
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	1360	1583	1136	616	236	1421
v/s Ratio Prot	c0.12		c0.19	0.12	c0.07	0.11
v/s Ratio Perm		c0.08				0.06
v/c Ratio	0.31	0.08	0.58	0.37	0.53	0.33
Uniform Delay, d1	19.4	0.0	24.9	22.9	36.3	15.2
Progression Factor	1.00	1.00	0.98	0.95	1.00	1.00
Incremental Delay, d2	0.6	0.1	0.4	0.1	1.0	0.0
Delay (s)	20.0	0.1	24.9	21.8	37.3	15.3
Level of Service	B	A	C	C	D	B
Approach Delay (s)	15.3			24.1	18.4	
Approach LOS	B			C	B	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	945	95	48	674	60	78	19	46	91	34	181
Future Volume (vph)	155	945	95	48	674	60	78	19	46	91	34	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	5.1		5.1	5.1		5.1	5.1			5.8	4.1
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.89			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	1834		1770	3492		1770	1666			1798	1583
Flt Permitted	0.95	1.00		0.12	1.00		0.67	1.00			0.62	1.00
Satd. Flow (perm)	1770	1834		215	3492		1249	1666			1154	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	167	1016	102	50	702	62	85	21	50	98	37	195
RTOR Reduction (vph)	0	3	0	0	8	0	0	40	0	0	0	105
Lane Group Flow (vph)	167	1115	0	50	757	0	85	31	0	0	135	90
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA		Perm	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	1!	8!			2!			4!			7!	1
Permitted Phases				2!			4!			7!		7
Actuated Green, G (s)	11.8	62.2		43.0	43.0		17.6	17.6			20.2	32.0
Effective Green, g (s)	11.8	62.2		43.0	43.0		17.6	17.6			20.2	32.0
Actuated g/C Ratio	0.13	0.69		0.48	0.48		0.20	0.20			0.22	0.36
Clearance Time (s)	4.1	5.1		5.1	5.1		5.1	5.1			5.8	4.1
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	232	1267		102	1668		244	325			259	562
v/s Ratio Prot	0.09	c0.61			0.22			0.02				0.02
v/s Ratio Perm				0.23			0.07				c0.12	0.04
v/c Ratio	0.72	0.88		0.49	0.45		0.35	0.09			0.52	0.16
Uniform Delay, d1	37.5	11.0		16.0	15.7		31.2	29.7			30.7	19.8
Progression Factor	1.16	0.84		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	8.2	6.9		15.9	0.9		0.3	0.0			0.9	0.0
Delay (s)	51.7	16.1		31.9	16.6		31.6	29.7			31.5	19.9
Level of Service	D	B		C	B		C	C			C	B
Approach Delay (s)		20.7			17.5			30.7			24.6	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		

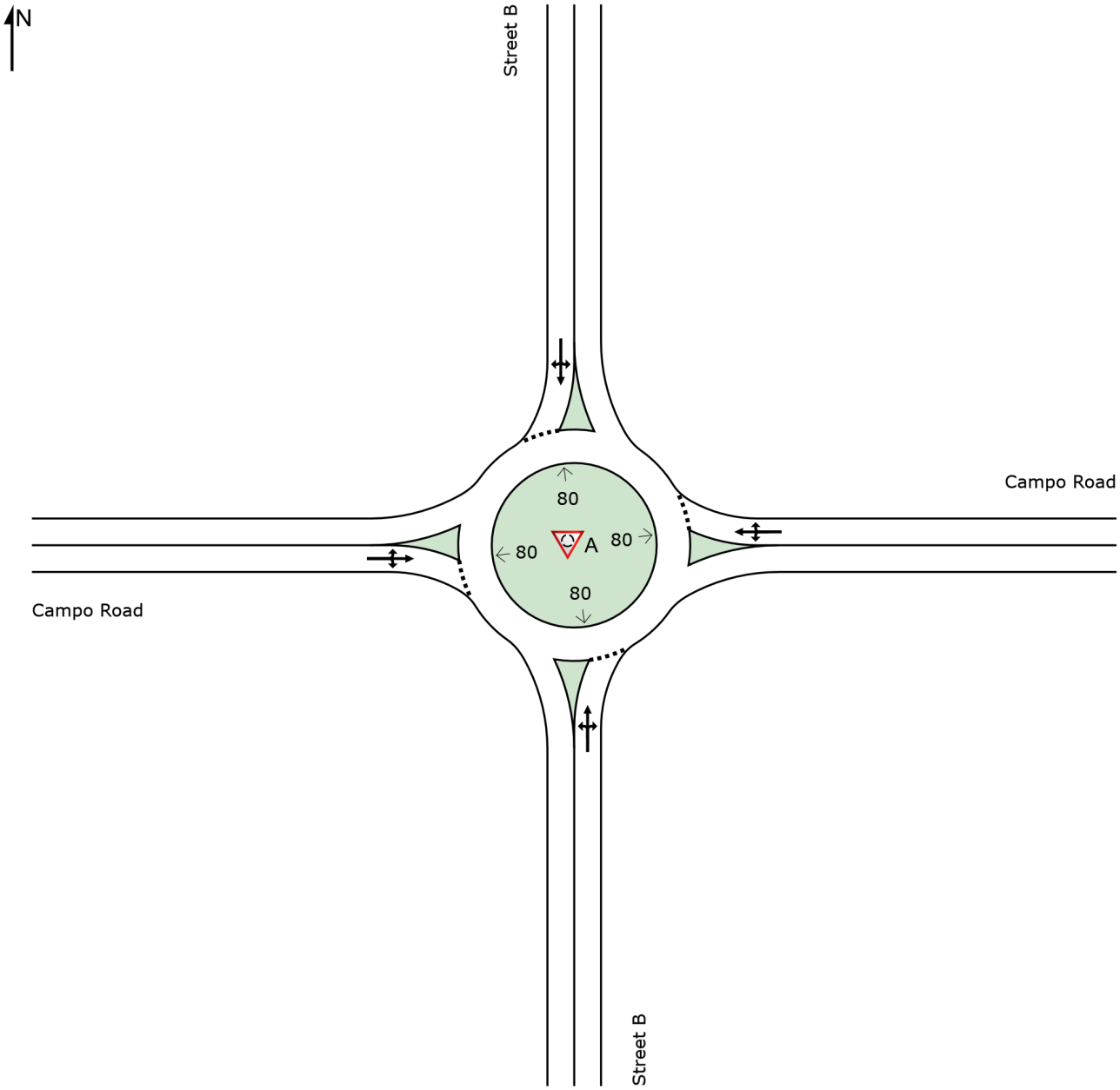
! Phase conflict between lane groups.
c Critical Lane Group

SITE LAYOUT

Site: A [Int. A (Site Folder: General)]

Campo Road / Street B
Site Category: HY 2035+P PM
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: A [Int. A (Site Folder: General)]

Campo Road / Street B
Site Category: HY 2035+P PM
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Street B														
3	L2	130	2.0	153	2.0	0.473	18.9	LOS C	2.3	57.4	0.81	0.92	1.21	27.2
8	T1	1	2.0	1	2.0	0.473	18.9	LOS C	2.3	57.4	0.81	0.92	1.21	27.3
18	R2	32	2.0	38	2.0	0.473	18.9	LOS C	2.3	57.4	0.81	0.92	1.21	26.7
Approach		163	2.0	192	2.0	0.473	18.9	LOS C	2.3	57.4	0.81	0.92	1.21	27.1
East: Campo Road														
1	L2	32	2.0	38	2.0	0.864	24.2	LOS C	29.9	760.5	1.00	1.29	2.00	26.7
6	T1	749	2.0	881	2.0	0.864	24.2	LOS C	29.9	760.5	1.00	1.29	2.00	26.7
16	R2	16	2.0	19	2.0	0.864	24.2	LOS C	29.9	760.5	1.00	1.29	2.00	26.2
Approach		797	2.0	938	2.0	0.864	24.2	LOS C	29.9	760.5	1.00	1.29	2.00	26.7
North: Street B														
7	L2	16	2.0	19	2.0	0.175	10.7	LOS B	0.6	16.3	0.71	0.71	0.71	31.2
4	T1	1	2.0	1	2.0	0.175	10.7	LOS B	0.6	16.3	0.71	0.71	0.71	31.3
14	R2	49	2.0	58	2.0	0.175	10.7	LOS B	0.6	16.3	0.71	0.71	0.71	30.6
Approach		66	2.0	78	2.0	0.175	10.7	LOS B	0.6	16.3	0.71	0.71	0.71	30.7
West: Campo Road														
5	L2	49	2.0	58	2.0	1.142	89.8	LOS F	193.0	4901.3	1.00	1.31	2.34	15.0
2	T1	1049	2.0	1234	2.0	1.142	89.8	LOS F	193.0	4901.3	1.00	1.31	2.34	15.0
12	R2	130	2.0	153	2.0	1.142	89.8	LOS F	193.0	4901.3	1.00	1.31	2.34	14.9
Approach		1228	2.0	1445	2.0	1.142	89.8	LOS F	193.0	4901.3	1.00	1.31	2.34	15.0
All Vehicles		2254	2.0	2652	2.0	1.142	59.2	LOS F	193.0	4901.3	0.98	1.26	2.09	18.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	890	97	32	700	16	0	0	52	0	0	65
Future Vol, veh/h	49	890	97	32	700	16	0	0	52	0	0	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	967	105	35	761	17	0	0	57	0	0	71

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	778	0	0	1072	0	0	-	-	1020	-	-	770
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	839	-	-	650	-	-	0	0	287	0	0	401
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	839	-	-	650	-	-	-	-	287	-	-	401
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.5	20.6	15.9
HCM LOS			C	C

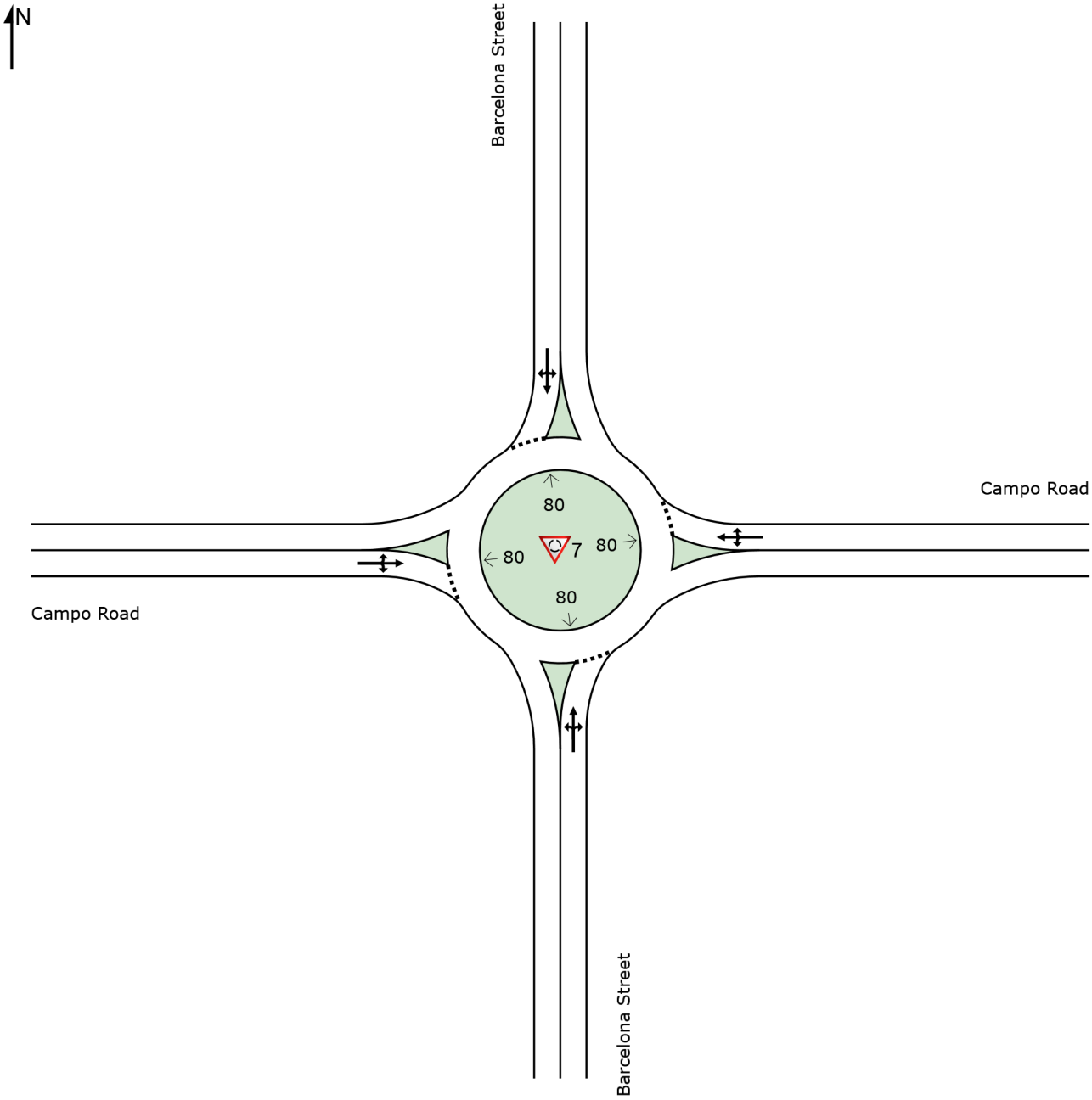
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	287	839	-	-	650	-	-	401
HCM Lane V/C Ratio	0.197	0.063	-	-	0.054	-	-	0.176
HCM Control Delay (s)	20.6	9.6	-	-	10.9	-	-	15.9
HCM Lane LOS	C	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.7	0.2	-	-	0.2	-	-	0.6

SITE LAYOUT

Site: 7 [Int. 7 (Site Folder: General)]

Campo Road / Barcelona Street
Site Category: HY 2035+P PM
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 6 [Int. 6 (Site Folder: General)]

Campo Road / Bonita Street
Site Category: HY 2035+P PM
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Bonita Street														
3	L2	85	2.0	98	2.0	0.388	13.9	LOS B	1.8	45.8	0.74	0.81	0.98	29.4
8	T1	17	2.0	20	2.0	0.388	13.9	LOS B	1.8	45.8	0.74	0.81	0.98	29.5
18	R2	63	2.0	72	2.0	0.388	13.9	LOS B	1.8	45.8	0.74	0.81	0.98	28.8
Approach		165	2.0	190	2.0	0.388	13.9	LOS B	1.8	45.8	0.74	0.81	0.98	29.2
East: Campo Road														
1	L2	27	2.0	28	2.0	0.584	10.6	LOS B	4.3	110.2	0.59	0.43	0.59	31.8
6	T1	569	2.0	593	2.0	0.584	10.6	LOS B	4.3	110.2	0.59	0.43	0.59	31.8
16	R2	22	2.0	23	2.0	0.584	10.6	LOS B	4.3	110.2	0.59	0.43	0.59	31.1
Approach		618	2.0	644	2.0	0.584	10.6	LOS B	4.3	110.2	0.59	0.43	0.59	31.8
North: Bonita Street														
7	L2	38	2.0	60	2.0	0.262	9.0	LOS A	1.1	27.6	0.66	0.66	0.66	31.8
4	T1	21	2.0	33	2.0	0.262	9.0	LOS A	1.1	27.6	0.66	0.66	0.66	31.8
14	R2	46	2.0	73	2.0	0.262	9.0	LOS A	1.1	27.6	0.66	0.66	0.66	31.1
Approach		105	2.0	167	2.0	0.262	9.0	LOS A	1.1	27.6	0.66	0.66	0.66	31.5
West: Campo Road														
5	L2	66	2.0	72	2.0	0.834	20.2	LOS C	19.1	484.2	0.87	0.67	1.07	27.9
2	T1	778	2.0	846	2.0	0.834	20.2	LOS C	19.1	484.2	0.87	0.67	1.07	28.0
12	R2	64	2.0	70	2.0	0.834	20.2	LOS C	19.1	484.2	0.87	0.67	1.07	27.4
Approach		908	2.0	987	2.0	0.834	20.2	LOS C	19.1	484.2	0.87	0.67	1.07	27.9
All Vehicles		1796	2.0	1987	2.0	0.834	15.6	LOS C	19.1	484.2	0.75	0.61	0.87	29.5

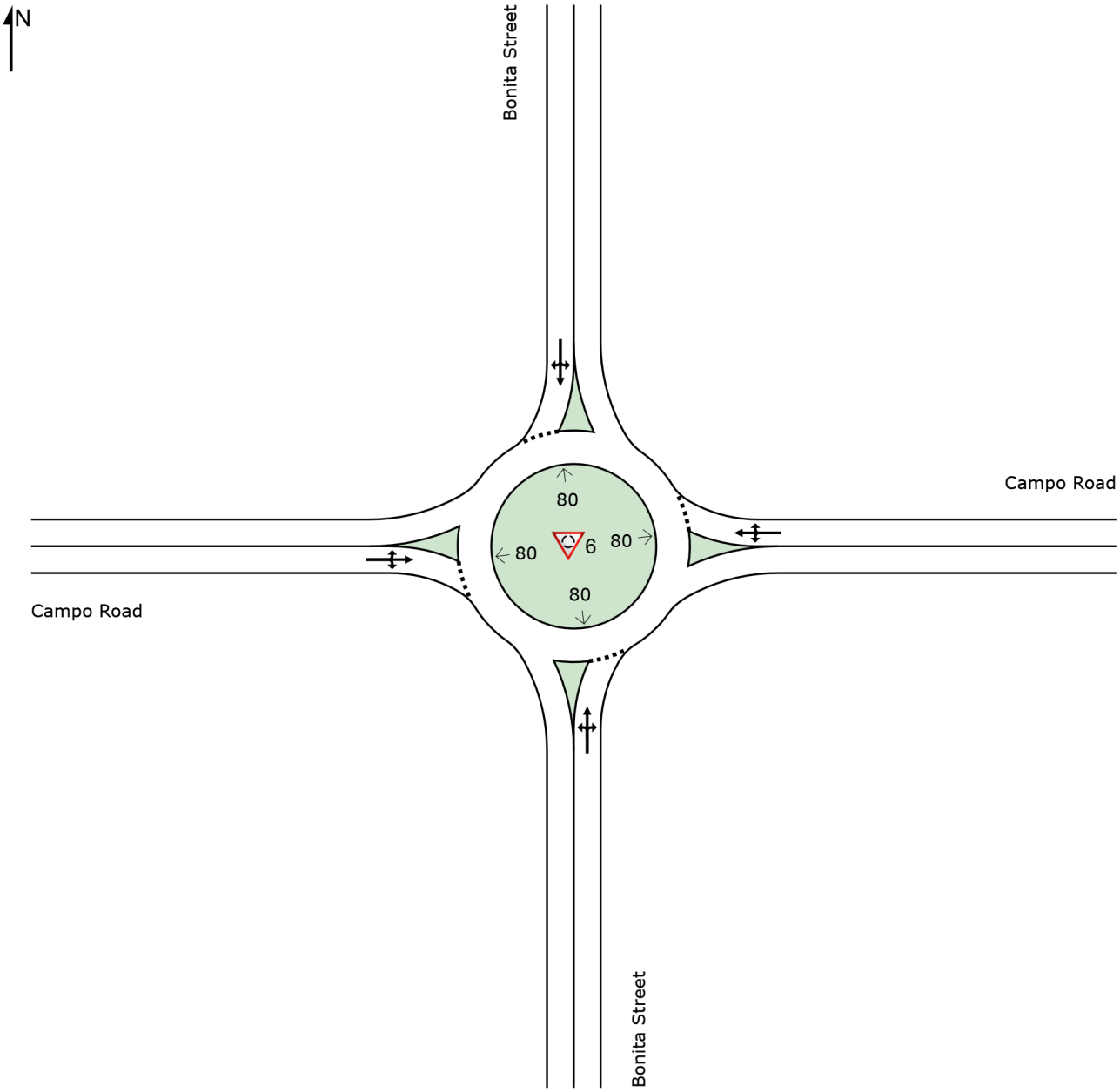
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 6 [Int. 6 (Site Folder: General)]

Campo Road / Bonita Street
Site Category: HY 2035+P PM
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 7 [Int. 7 (Site Folder: General)]

Campo Road / Barcelona Street
Site Category: HY 2035+P PM
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Barcelona Street														
3	L2	169	2.0	180	2.0	0.386	10.3	LOS B	2.0	50.3	0.69	0.73	0.82	30.6
8	T1	11	2.0	12	2.0	0.386	10.3	LOS B	2.0	50.3	0.69	0.73	0.82	30.6
18	R2	72	2.0	77	2.0	0.386	10.3	LOS B	2.0	50.3	0.69	0.73	0.82	29.9
Approach		252	2.0	268	2.0	0.386	10.3	LOS B	2.0	50.3	0.69	0.73	0.82	30.4
East: Campo Road														
1	L2	98	2.0	101	2.0	0.513	9.3	LOS A	3.4	86.4	0.55	0.40	0.55	32.1
6	T1	419	2.0	432	2.0	0.513	9.3	LOS A	3.4	86.4	0.55	0.40	0.55	32.1
16	R2	23	2.0	24	2.0	0.513	9.3	LOS A	3.4	86.4	0.55	0.40	0.55	31.4
Approach		540	2.0	557	2.0	0.513	9.3	LOS A	3.4	86.4	0.55	0.40	0.55	32.1
North: Barcelona Street														
7	L2	26	2.0	34	2.0	0.169	7.6	LOS A	0.7	16.9	0.63	0.63	0.63	32.5
4	T1	30	2.0	39	2.0	0.169	7.6	LOS A	0.7	16.9	0.63	0.63	0.63	32.6
14	R2	26	2.0	34	2.0	0.169	7.6	LOS A	0.7	16.9	0.63	0.63	0.63	31.8
Approach		82	2.0	108	2.0	0.169	7.6	LOS A	0.7	16.9	0.63	0.63	0.63	32.3
West: Campo Road														
5	L2	12	2.0	12	2.0	0.786	17.8	LOS C	18.4	467.2	0.83	0.85	1.29	28.9
2	T1	570	2.0	588	2.0	0.786	17.8	LOS C	18.4	467.2	0.83	0.85	1.29	28.9
12	R2	272	2.0	280	2.0	0.786	17.8	LOS C	18.4	467.2	0.83	0.85	1.29	28.3
Approach		854	2.0	880	2.0	0.786	17.8	LOS C	18.4	467.2	0.83	0.85	1.29	28.7
All Vehicles		1728	2.0	1813	2.0	0.786	13.5	LOS B	18.4	467.2	0.71	0.68	0.95	30.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	69	408	19	31	421	32	0	0	33	0	0	87
Future Vol, veh/h	69	408	19	31	421	32	0	0	33	0	0	87
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	443	21	34	458	35	0	0	36	0	0	95

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	493	0	0	464	0	0	-	-	454	-	-	476
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	1071	-	-	1097	-	-	0	0	606	0	0	589
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1071	-	-	1097	-	-	-	-	606	-	-	589
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.5	11.3	12.3
HCM LOS			B	B

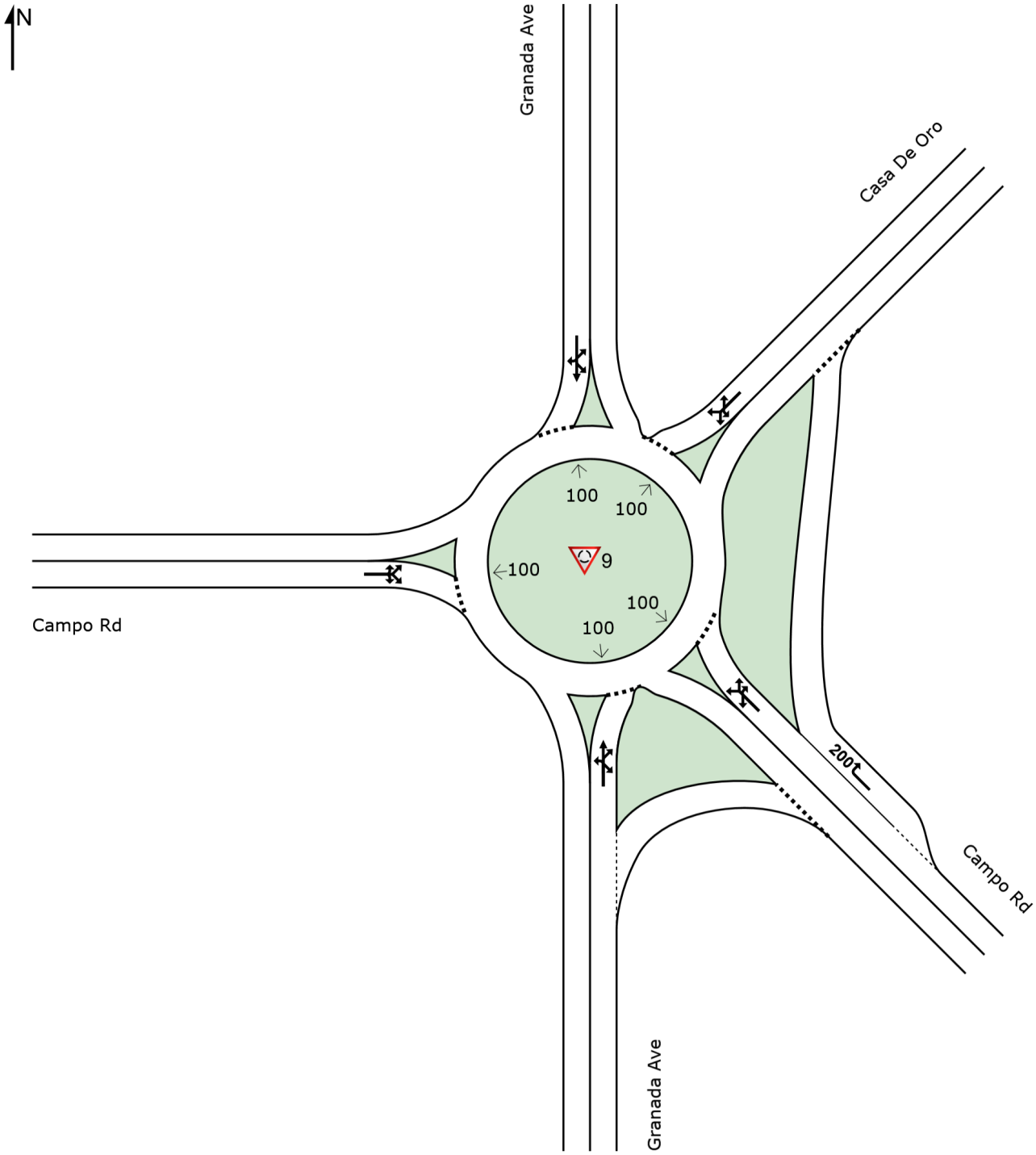
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	606	1071	-	-	1097	-	-	589
HCM Lane V/C Ratio	0.059	0.07	-	-	0.031	-	-	0.161
HCM Control Delay (s)	11.3	8.6	-	-	8.4	-	-	12.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0.1	-	-	0.6

SITE LAYOUT

Site: 9 [Int 9 (Site Folder: General)]

Campo / Granada / CDO 1-Lane
Site Category: HY 2035+P PM
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 9 [Int 9 (Site Folder: General)]

Campo / Granada / CDO 1-Lane
Site Category: HY 2035+P PM
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Granada Ave														
3	L2	15	2.0	19	2.0	0.189	9.8	LOS A	0.7	18.5	0.67	0.67	0.67	32.6
8	T1	1	2.0	1	2.0	0.189	9.8	LOS A	0.7	18.5	0.67	0.67	0.67	32.6
18a	R1	8	2.0	10	2.0	0.189	9.8	LOS A	0.7	18.5	0.67	0.67	0.67	32.3
18b	R3	56	2.0	72	2.0	0.189	8.8	LOS A	0.7	18.5	0.67	0.67	0.67	31.4
Approach		80	2.0	103	2.0	0.189	9.1	LOS A	0.7	18.5	0.67	0.67	0.67	31.7
SouthEast: Campo Rd														
3bx	L3	22	2.0	29	2.0	0.438	7.6	LOS A	2.6	64.9	0.43	0.29	0.43	32.2
3ax	L1	359	2.0	472	2.0	0.438	7.6	LOS A	2.6	64.9	0.43	0.29	0.43	31.5
18ax	R1	13	2.0	17	2.0	0.438	7.6	LOS A	2.6	64.9	0.43	0.29	0.43	31.5
18x	R2	51	2.0	67	2.0	0.055	3.4	LOS A	0.2	5.4	0.25	0.13	0.25	35.0
Approach		445	2.0	586	2.0	0.438	7.1	LOS A	2.6	64.9	0.41	0.27	0.41	31.9
NorthEast: Casa De Oro														
1x	L2	45	2.0	63	2.0	0.267	7.8	LOS A	1.2	30.0	0.62	0.60	0.62	33.0
1ax	L1	5	2.0	7	2.0	0.267	7.8	LOS A	1.2	30.0	0.62	0.60	0.62	32.6
16ax	R1	90	2.0	127	2.0	0.267	7.8	LOS A	1.2	30.0	0.62	0.60	0.62	32.7
16bx	R3	4	2.0	6	2.0	0.267	7.8	LOS A	1.2	30.0	0.62	0.60	0.62	31.7
Approach		144	2.0	203	2.0	0.267	7.8	LOS A	1.2	30.0	0.62	0.60	0.62	32.7
North: Granada Ave														
7b	L3	1	2.0	2	2.0	0.111	6.9	LOS A	0.4	10.9	0.61	0.60	0.61	33.1
7a	L1	32	2.0	48	2.0	0.111	6.9	LOS A	0.4	10.9	0.61	0.60	0.61	32.4
4	T1	3	2.0	5	2.0	0.111	6.9	LOS A	0.4	10.9	0.61	0.60	0.61	32.7
14	R2	11	2.0	17	2.0	0.111	6.9	LOS A	0.4	10.9	0.61	0.60	0.61	31.8
Approach		47	2.0	71	2.0	0.111	6.9	LOS A	0.4	10.9	0.61	0.60	0.61	32.3
West: Campo Rd														
5	L2	12	2.0	16	2.0	0.759	16.0	LOS C	13.7	348.6	0.77	0.66	0.99	29.9
5a	L1	96	2.0	126	2.0	0.759	16.0	LOS C	13.7	348.6	0.77	0.66	0.99	29.6
12a	R1	546	2.0	718	2.0	0.759	16.0	LOS C	13.7	348.6	0.77	0.66	0.99	29.7
12	R2	11	2.0	14	2.0	0.759	16.0	LOS C	13.7	348.6	0.77	0.66	0.99	29.1
Approach		665	2.0	875	2.0	0.759	16.0	LOS C	13.7	348.6	0.77	0.66	0.99	29.7
All Vehicles		1381	2.0	1837	2.0	0.759	11.5	LOS B	13.7	348.6	0.63	0.53	0.73	30.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix C
Parking Study

CASA DE ORO

CAMPO ROAD REVITALIZATION PLAN

Contents

Appendix E - Parking Study

A comprehensive parking assessment was conducted to identify existing conditions and forecast future conditions as a component of the Campo Road Corridor Revitalization Specific Plan (Specific Plan) project.

Existing Public Parking Supply

Existing parking within the Campo Road Corridor is provided through a combination of on-street parking and parking lot areas both in front of and behind the buildings along Campo Road.

A parking survey was designed to inventory existing on-street and off-street commercial lot parking and to quantify parking utilization throughout the day. For the purpose of tracking parking data, a total of 72 parking zones were defined, including 13 on-street zones and 59 off-street zones, as shown in **Figure 1**. The general extents of the survey included 60 off-street parking lots on non-residential parcels along Campo Road between Rodgers Road and Granada Avenue / Casa de Oro Boulevard. In addition, 12 road segments with on-street parking block faces were included along both sides of the following minor streets:

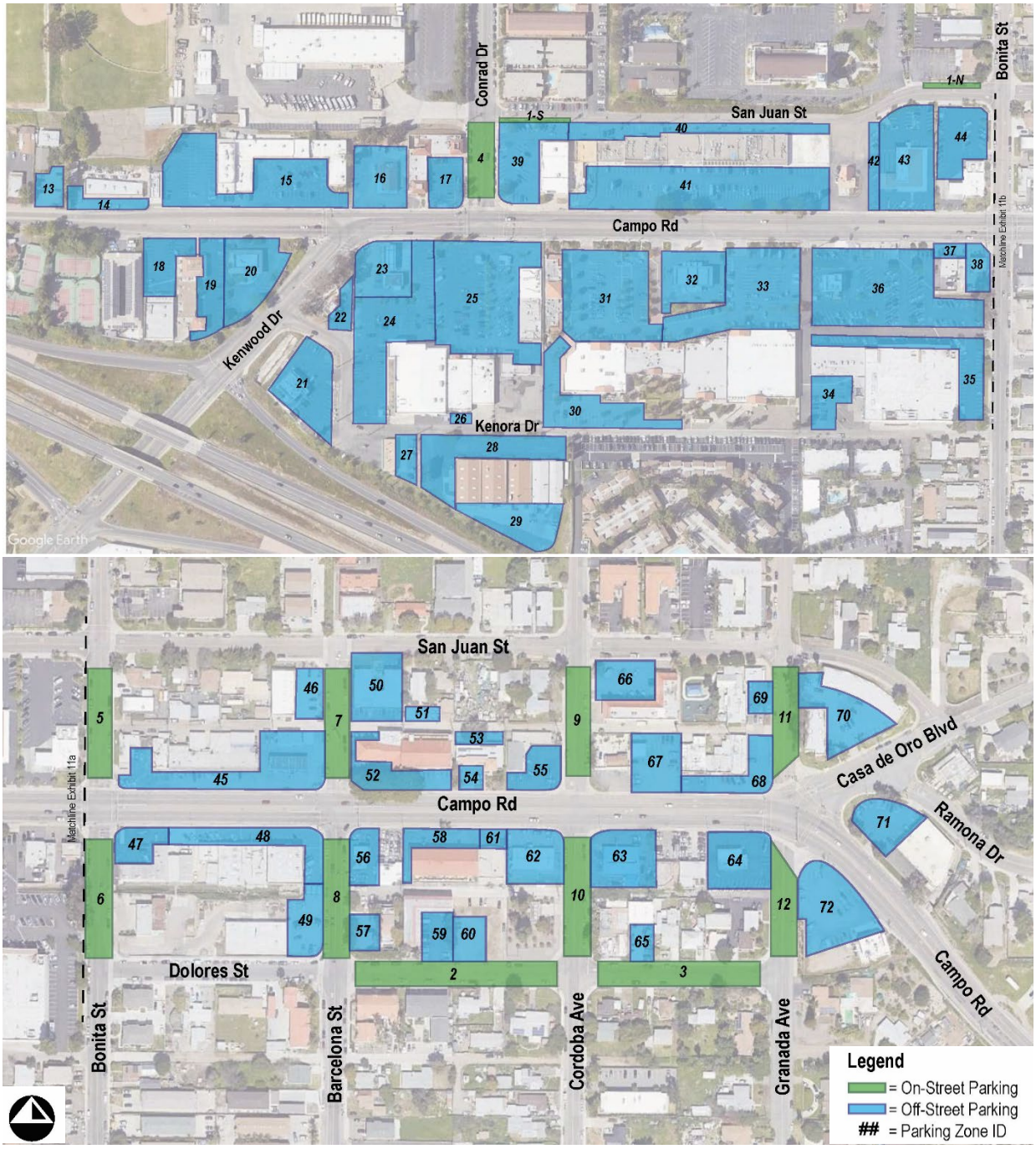
- Conrad Avenue (Campo Road to San Juan Street)
- Bonita Street (Dolores Street to San Juan Street)
- Barcelona Street (Dolores Street to San Juan Street)
- Cordoba Avenue (Dolores Street to San Juan Street)
- Granada Avenue (Dolores Street to San Juan Street)

The survey identified a total of 1,794 off-street parking spaces and 175 on-street parking spaces for a total of 1,969 parking spaces in the Specific Plan area (See **Table 1** for summary and **Table 3** for a zone by zone inventory for off-street parking). Where not otherwise marked, on-street parking capacity was estimated as the segment length divided by a parking stall length of 20 feet.

Table 1: Existing Parking Inventory

Parking Type		Total Inventory
On-Street		175
Off Street	Regular	1,607
	ADA	62
	ADA - Van	25
	Customer Only	16
	Time Restricted	55
	Other (1)	29
Sub-Total Off-Street		**1,794**
Total Parking Supply		**1,969**

Figure 1: Parking Zones



Source: Michael Baker International

Existing Parking Ratios

The community along the Campo Road Corridor is primarily commercial in nature with a mix of retail, fast food, restaurants, and offices. **Table 2** shows the County of San Diego required parking rates per Zoning Ordinance Part 6.

As shown in **Table 2,** the parking rates range from 1.0 spaces per 1,000 square feet (KSF) for light manufacturing to 12.0 spaces per KSF for a fast-food restaurant without a drive-thru and averages at 5.2 spaces per KSF.

Table 2: County Parking Rates

Land Use		Parking Rate
Commercial Office		4.0 / KSF
Bank		4.0 / KSF
Restaurant	Up to 3 KSF	6.0 / KSF
	More than 3 KSF	10.0 / KSF
Fast-Food Restaurant	With Drive-Thru	9.5 / KSF
	Without Drive-Thru	12.0 / KSF
Retail		4.5 / KSF
Liquor Store		3.3 / KSF
Drugstore		3.5 / KSF
Library		3.0 / KSF
General Manufacturing		1.5 / KSF
Light Manufacturing		1.0 / KSF

Source: San Diego County Zoning Ordinance (Part 6: General Provisions, Section 6762-6764)
KSF = 1,000 square feet

Based on available land parcel information within the study area, existing parking supply rates were calculated for non-residential properties included in the parking inventory. It should be noted that this parcel information did not include specific land use type categories. **Table 3** summarizes the existing parking supply rate per the parking inventory. **Table 3** also compares these supply rates to the actual parking demand that was recorded during the parking utilization survey for the properties included in the analysis.

As shown, the existing parking supply provided by individual parcels ranges from 0.9 spaces per KSF to 10.3 spaces per KSF. When the entire study area is considered as a whole, parking is provided at a rate of 3.3 spaces per KSF (1,786 spaces / 548.43 KSF = 3.3 spaces per KSF). This range of parking supply rates for the study area parcels and the average supply rate is consistent with the County code parking requirements.

Table 3: Parking Inventory

Parking Zone ID	Floor Area (SF)	Parking Inventory	Existing Parking Supply Rate [1]	Peak Parking Demand [2]	Actual Parking Demand Rate [3]
13	7,730	11	1.4	4	0.5
14	5,780	11	1.9	4	0.7
15	25,130	109	4.3	27	1.1
16	3,440	25	7.3	4	1.2
17	10,980	25	2.3	15	1.4
18	7,360	29	3.9	11	1.5
19	11,180	36	3.2	19	1.7
20	5,230	16	3.1	7	1.3
21	4,150	35	8.4	7	1.7
22	4,970	11	2.2	1	0.2
23	3,290	3	0.9	1	0.3
24-26	37,090	201	5.4	65	1.8
28-29	27,200	67	2.5	38	1.4
30-33	59,630	308	5.2	135	2.3
34-36	69,010	196	2.8	112	1.6
37	2,920	5	1.7	2	0.7
38	1,040	2	1.9	7	6.7
39	8,790	37	4.2	14	1.6
40-41	38,960	220	5.6	79	2.0
42	2,420	8	3.3	5	2.1
43	17,250	32	1.9	7	0.4
44	5,730	25	4.4	7	1.2
45	18,120	28	1.5	22	1.2
46	5,150	9	1.7	4	0.8
47	3,900	14	3.6	7	1.8
48	15,240	26	1.7	20	1.3
49	13,310	11	0.8	16	1.2
50	6,140	14	2.3	5	0.8
51	2,150	4	1.9	2	0.9
52	20,740	20	1.0	13	0.6
53-54	4,190	17	4.1	7	1.7
55	3,380	15	4.4	5	1.5
56	1,640	9	5.5	9	5.5
57*	4,750	7	NA	NA	NA
58	17,640	18	1.0	10	0.6

59	10,770	18	1.7	17	1.6
61	3,120	5	1.6	2	0.6
62*	4,100	1	0.2	5	1.2
64	2,530	26	10.3	7	2.8
65	2,500	6	2.4	3	1.2
66	18,550	18	1.0	13	0.7
67-68	10,940	31	2.8	3	0.3
69	6,360	9	1.4	7	1.1
70	10,710	26	2.4	23	2.1
71	8,870	22	2.5	15	1.7
72	3,200	28	8.8	12	3.8
Totals	**548,430**	**1,794**	**3.3**	**793**	**1.4**

(1) Existing parking rate calculated using total parking inventory per 1,000 SF of floor area (spaces/1,000 SF)

(2) Peak Parking Demand based on parking survey data from Friday, December 13 at 2:00 p.m.

(3) Actual parking rate calculated using peak parking utilization per 1,000 SF of floor area (spaces/1,000 SF)

** Not included in total utilization calculations*

Existing Public Parking Utilization

Based on existing public parking capacity and observed parked vehicles, only 7 of 72 parking zones were parked at the optimal 85 percent capacity or higher at some point during the day.

Based on the parking survey, the lowest combined parking demand for the study area parking zones is during the 10:00 a.m. hour, when 693 spaces or 35.2 percent of the total available spaces in the study area zones were utilized.

According to the parking utilization survey, the actual parking demand rate ranges from 0.2 spaces per KSF to 6.7 spaces per KSF. When the entire study area is considered as a whole, parking is utilized at a demand rate of 1.4 spaces per KSF (793 spaces / 548.43 KSF = 1.4 spaces per KSF). Therefore, the actual parking demand is less than half of the parking supply within the study area (refer to **Table 4**).

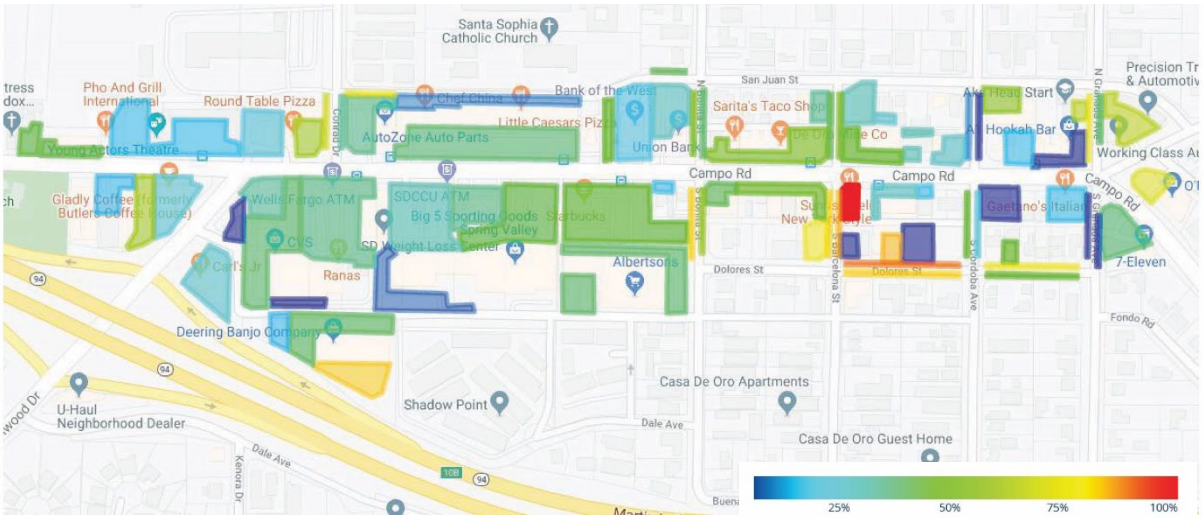
The peak parking demand occurred at 2:00 p.m. when 102 on-street parking spaces and 798 off-street parking spaces were occupied for a total of 900 occupied spaces. This represents a combined parking utilization of 45.7 percent and a parking utilization ratio of 1.6 spaces per 1,000 square feet of floor area. If adjusted 20 percent for vacant and underutilized floor area based on CoStar reports and windshield survey, the combined demand ratio is 1.9 spaces per 1,000 square feet of occupied floor area. This shows that less than half of the available parking spaces are occupied within the study area, even during the peak period. The survey found that on-street parking utilization (58.3 percent) was higher than off-street parking utilization (44.5 percent). Peak parking utilization is depicted in **Figure 2** and **Table 4**.

Table 4: Peak Parking Utilization

Parking	Inventory	Peak Occupancy[1]	Peak Utilization
On-Street	175	102	58.3%
Off-Street	1,794	798	44.5%
Total	**1,969**	**900**	**45.7%**

[1] Peak Parking Demand based on parking survey data from Friday, December 13 at 2:00 p.m.

Figure 2: Peak Parking Utilization



Source: National Data & Surveying Services, Michael Baker International

Based on the Corridor's 1,969 parking space supply, the current excess parking supply is approximately 1,069 parking spaces for existing conditions. This also demonstrates that the minimum parking requirements are significantly higher than actual usage and require far more land to be dedicated to parking than necessary to meet demand.

Proposed Parking Strategy

The Specific Plan area includes a combination of on-street and on-site parking opportunities. Most of the parking is expected to remain at the surface level. Higher-density residential and mixed-use projects will most likely use tuck-under or podium buildings over parking on the ground level.

This plan establishes that the existing parking supply can meet future growth without the need to construct additional public parking. Public parking on private lots is encouraged and may occur through lease arrangements, in-lieu fees, or other local parking management techniques.

The most significant change is the reconfiguration of Campo Road from a major arterial to a landscaped, walkable, bikeable main street environment with 200 new parallel and diagonal parking spaces between Conrad Drive and Granada Avenue, as shown in **Figure 3**.

Figure 3: Circulation Plan Concept

Source: Michael Baker International, KTU+A

These physical improvements will be combined with reduced minimum parking requirements based on actual parking demands in the Corridor and research of parking standards applied in other main street mixed-use corridors, as seen in **Table 5.** Parking management through the encouragement of shared parking between uses will also reduce the need for parking space.

Park Once and Walk

The plan includes a Park Once strategy, meaning one space can serve several trips, thereby reducing total vehicular travel and enabling a reduction in total required parking. For example, for someone who needs to visit three locations within the District, the current approach requires three separate parking spaces for three separate driving trips. If the customer is able to walk between nearby destinations, then only one parking space is required.

A Park Once strategy would also result in people spending more time in the area as they walk from destination to destination, potentially making unplanned visits to other stores along the way. This may result in increased sales and enjoyment. The key tenet of the Park Once strategy is to create an environment where it is easy, safe, and attractive for visitors to the Corridor to conduct several trips without moving their vehicles.

The proposed Campo Road reconfiguration includes streetscapes, reduced vehicle speeds, reduced noise, the addition of street trees on side streets, and the extension of the street grid to create smaller blocks and multiple direct paths and connections. These changes will lead to a safe and attractive walking environment which in turn helps with the Park Once strategy.

Parking Management

Reducing the number of parking spaces to "maximize" the use of those remaining is one parking management strategy. Other features, such as time limits, demand management, and

signage/wayfinding, would improve optimization. Demand management should include increased accessibility and sharing of spaces.

Another parking management strategy applicable to the Specific Plan area is reducing the required off-street parking for spaces shared between properties pursuant to a shared parking agreement. This plan identifies opportunities to provide pedestrian and vehicular connections between properties. Some examples of how existing parking can be shared are shown in **Figure 4.**

Figure 4: Connecting Divided Parking Lots

Source: Michael Baker International, KTU+A

Reduced Off-Street Parking

This plan proposes to simplify and reduce the minimum parking requirement ratios to reflect actual rates of usage for the Corridor and similar mixed-use centers. As documented previously, the parking supply ranges from 0.9 spaces per KSF to 10.3 spaces per KSF, with an average of 3.3 spaces per KSF. However, the actual peak parking demand was 1.9 spaces per 1,000 square feet of gross floor area.

These demand rates are consistent with multiple main street block supply rates in Carlsbad, Encinitas, Solana Beach, and Bird Rock. The sampled blocks for the example corridors had supply rates between 1.1 and 2.7 per 1,000 and an average supply rate of 1.6 spaces per 1,000, as shown in **Table 5**.

Table 5: Mainstreet Block Parking Ratio Examples

	GROSS FLOOR AREA				PARKNG SUPPLY				SUPPLY RATIO		
LOCATION	**GSF**	**1st floor**	**2nd floor**	**3rd floor**	**Total Spaces**	**On-street**	**Off-street**	**Below-grade**	**Total Ratio**	**On-street Ratio**	**Off-street Ratio**
Birdrock											
Block 1 (LJ Blvd at NW)	59,000	39,000	12,500	7,500	73	33	20	20	1.2	0.6	0.7
Block 2 (NE)	50,000	41,000	9,000		45	27	18		0.9	0.5	0.4
Combined Average	**109,000**	**80,000**	**21,500**	**7,500**	**118**	**60**	**38**	**20**	**1.1**	**0.6**	**0.5**
Solano Beach											
Hwy 101@ Loma SF (NW)	**23,000**	**23,000**			**62**	**7**	**55**		**2.7**	**0.3**	**2.4**
Carlsbad											
Block 1 (State at Carlsbad Village Dr-West)	34,000	29,000	5,000		93	28	65		2.7	0.8	1.9
Block 2 (State at Carlsbad Village Dr-East)	38,000	32,000	6,000		56	31	25		1.5	0.8	0.7
Combined Average	**72,000**	**61,000**	**11,000**	**-**	**149**	**59**	**90**	**-**	**2.1**	**0.8**	**1.3**
Encinitas											
Block 1 East (Hwy 101 E-D)	36,000	30,000	6,000		50	23	27		1.4	0.6	0.8
Block 2 West (Hwy 101 E-D)	23,000	22,000	1,000		39	20	19		1.7	0.9	0.8
Combined Average	**59,000**	**52,000**	**7,000**	**-**	**89**	**43**	**46**	**-**	**1.5**	**0.7**	**0.8**
TOTAL ALL EXAMPLES	**263,000**	**216,000**	**39,500**	**7,500**	**418**	**169**	**229**	**20**	**1.6**	**0.6**	**0.9**

The parking study recommends a reduction of minimum parking standards for various uses, as shown in **Table 6**.

Table 6: Recommended Parking Ratio

Use	Existing Parking per County Code	Recommended Parking
Retail Space	4.5 spaces per 1,000 square feet	2.0 spaces per 1,000 square feet
Office	4.0 spaces per 1,000 square feet	2.2 spaces per 1,000 square feet
Eating Establishments	6.0 to 12.0 per 1,000 square feet depending on the type of establishment	4.0 spaces per 1,000 square feet
Multi-family Dwelling Unit	1.5 spaces for a studio, one-bedroom, and two-bedroom dwelling units; 2.0 spaces for a three-bedroom dwelling unit	1.0 space per dwelling unit

Table 7 shows the required parking based on the land-use scenarios developed for the Specific Plan. Approximately 1,900 and 2,600 spaces will be required for the alternative buildout scenarios. These estimates do not include any of the proposed credits for new on-street parking or any deductions for shared or managed parking or trip demand management.

With an existing parking supply of 1,794 off-street and 200 new on-street parking spaces, three of the build scenarios will have ample parking even with maintaining the current square footage of the building footprint. The development will require 300 to 500 additional spaces for two scenarios. This can be easily accomplished with the reconfiguration of buildings and parking during the design stage. It can also be provided by underground, structured, or tuck-under parking.

Table 7: Parking Required Based on Scenarios

Scenario	Use	Existing Development (SF or DU)*	Proposed Development (SF or DU)*	Total Development (SF or DU)*	Proposed Parking Ratio	Total Required Parking
SCENARIO 1: No Retail Growth-20 to 30 percent backfill, Max Residential	Retail/Service	406,072	-	406,072	2.0/ 1,000 SF	812
	Office/Bank/Civic	155,422	-	155,422	2.2/ 1,000 SF	342
	Restaurant/Bar	15,574	-	15,574	4.0/ 1,000 SF	62
	Residential	66	675	741	1.0/ DU	741
	TOTAL	**643,068**	**675,000**	**1,318,068**		**1,957**
SCENARIO 2: 15% Retail Contraction, Max Residential	Retail/Service	406,072	(61,318)	344,754	2.0/ 1,000 SF	690
	Office/Bank/Civic	155,422	-	155,422	2.2/ 1,000 SF	342
	Restaurant/Bar	15,574	-	15,574	4.0/ 1,000 SF	62

	Residential	66	1,200	1,266	1.0/ DU	1,266
	TOTAL	**643,068**	**1,138,682**	**1,781,750**		**2,360**
SCENARIO 3: 23% Retail Contraction, Max Residential	Retail/Service	406,072	(91,977)	314,095	2.0/ 1,000 SF	628
	Office/Bank/Civic	155,422	-	155,422	2.2/ 1,000 SF	342
	Restaurant/Bar	15,574	-	15,574	4.0/ 1,000 SF	62
	Residential	66	1,450	1,516	1.0/ DU	1,516
	TOTAL	**643,068**	**1,358,023**	**2,001,091**		**2,548**
SCENARIO 4: 15% Retail Contraction; balance residential, office, restaurant	Retail/Service	406,072	(61,318)	344,754	2.0/ 1,000 SF	690
	Office/Bank/Civic	155,422	20,000	175,422	2.2/ 1,000 SF	386
	Restaurant/Bar	15,574	15,500	31,074	4.0/ 1,000 SF	124
	Residential	66	600	666	1.0/ DU	666
	TOTAL	**643,068**	**574,182**	**1,217,250**		**1,866**
SCENARIO 5: 23% Retail Contraction; balance residential, office, restaurant	Retail/Service	406,072	(91,977)	314,095	2.0/ 1,000 SF	628
	Office/Bank/Civic	155,422	45,000	200,422	2.2/ 1,000 SF	441
	Restaurant/Bar	15,574	22,500	38,074	4.0/ 1,000 SF	152
	Residential (DUs)	66	625	691	1.0/ DU	691
	TOTAL	**643,068**	**600,523**	**1,243,591**	**-**	**1,912**

On-Street-Parking

The highest value spaces for commerce are the on-street parking spaces near the business. They are the most accessible to drivers, closest to the business, and have high rates of usage and sharing as measured in turnover.

Driveway Consolidation

Driveway consolidation and angled parking are essential to maximizing the number of spaces and their full potential. This can only be achieved with the encouragement of side street access and back of building or alleyway access for vehicles under future redevelopment. The proposed plan with the 100-foot right of way and angled parking on both sides of the road can nearly provide 200 parking spaces along Campo Road, as shown in **Table 11**. However, in order to achieve this, at least half of the driveways will need to be closed. The specific driveways to be closed will depend on future development and negotiations with property owners.

Table 8: Parking Spaces between Conrad Drive and Granada Avenue

Campo Road On-Street Parking	Side of Campo Road	
	North	South
Kenwood Drive to Conrad Drive	0	0
Conrad Drive to New Street 1	4	6
New Street 1 to New Street 2	12	18
New Street 2 to Bonita Street	24	18
Bonita Street to Barcelona Street	17	24
Barcelona Street to Cordoba Avenue	25	18
Cordoba Avenue to Granada Avenue	10	19
Subtotal	**92**	**103**
Total	**195**	

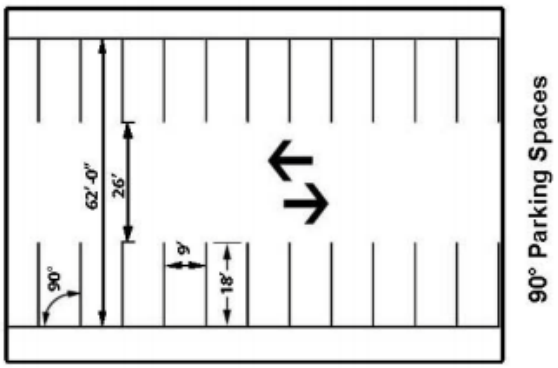
On-street public parking along the property frontage will be credited toward the required parking at a rate of 1.5 spaces to each physical space due to their value and efficiency. This incentivizes adjacent property owners to support and build these on-street spaces, which will contribute to the optimized use of parking spaces.

Replacing Nonconforming Parking Spaces

There are approximately 287 substandard and nonconforming shallow front parking spaces along Campo Road, concentrated in the section between Bonita Street and Granada Avenue.

County standard parking design requires a combined 44 feet of depth for each perpendicular parking space—18 feet minimum for the parking stall, plus a 26-foot maneuvering space to enter and exit the stall. Combined, the minimum allowable depth from the back of a 5-foot-wide sidewalk to the front of the building with a single row of perpendicular parking would be 49 feet (see **Figure 5**) as compared to the 30-40 feet currently provided. This means that vehicles regularly back into and drive over the unprotected sidewalk and/or parking immediately adjacent to the building. This results in unsafe conditions and conflicts between vehicles and pedestrians. As recommended in the County Parking Design Manual, wheel stops should be required to prevent vehicle bumpers from intruding on pedestrian spaces.

Figure 5: Parking Space Configuration



Source: San Diego County standard parking design standards

The Specific Plan proposes the removal of these 287 spaces and the provision of approximately 100 new on-street public parking spaces between Bonita Street and Granada Avenue. An additional 100 spaces are also provided west of Bonita Avenue. Converting the private nonconforming private spaces to public on-street spaces will improve the utilization of the available spaces in this section. Coupled with the Park Once strategy discussed earlier, the 200 on-street spaces would serve as many (or more) parkers as the 287 private nonconforming spaces.

The Specific Plan replaces these spaces in a phased approach with expanded sidewalk or patio areas between the sidewalk and building, outdoor dining, or expanded or new buildings. Access to these spaces will become limited with the construction of the proposed on-street spaces.

As shown in the photo sketches in **Figure 6**, it is possible in the near term to dramatically improve safety by creating one or two lanes of parallel spaces in the existing nonconforming areas. Since existing curb-to-curb space and existing sidewalks are utilized, the cost of this conversion is relatively low compared to the new roadway proposed in the final design.

Figure 6: Existing and Potential Parking Design for Phase 1

Source: Google Earth, Michael Baker International, KTU+A

This alignment fits the available space and redirects vehicle movements away from the sidewalks and buildings. There would be little change and possibly an increase in the number of spaces where two rows of parking are provided. The realignments can be accomplished with paint for striping of the parking spaces while also allowing for the closure and consolidation of many driveways and the creation of new parallel spaces on Campo Road. If a buffered bike lane is provided at this stage, it will require constructing the median. The number of spaces is influenced by the number of access driveways that would remain, which cannot yet be determined.

Efforts to adapt and realign as many of these spaces should be initiated with property/business owners as soon as possible. It is recommended that a pilot demonstration project be tested on one block. This can be done on a temporary or short-term basis to test and adjust the concept. Inexpensive planters with landscaping can be used to close excess driveways, delineate parking spaces, and protect the adjacent sidewalk. The idea is to create a positive cycle and momentum of improvements as soon as possible. Small interventions can lead to significant changes.

Appendix D
Market Study

CASA DE ORO
CAMPO ROAD REVITALIZATION PLAN

I. INTRODUCTION

The County of San Diego (County) engaged Michael Baker International (MBI) to provide planning services related to the Casa de Oro Specific Plan (Specific Plan). Specifically, the Casa de Oro study area is located in the Valle de Oro planning area, along the Campo Road commercial corridor between Granada Avenue and Rogers Road (Study Area). As a member of the MBI team, Keyser Marston Associates, Inc. (KMA) was tasked with assessing the financial feasibility of potential new multi-family and/or mixed-use development within the Study Area.

In completing this assignment, KMA undertook the following principal tasks:

- Reviewed background data, reports, and maps for the Specific Plan area
- Conducted a limited review of market trends within the Study Area
- Surveyed comparable sales values for both vacant land and improved properties in the trade area
- Identified potential development prototypes and prepared financial pro forma analyses to measure their feasibility

II. KEY FINDINGS

A. Potential Development Prototypes

In identifying potential development prototypes for the financial feasibility analysis, KMA selected project descriptions that serve as tangible examples of the types of development that

could be anticipated to occur in the Study Area in the future. The development prototypes were selected through a process which considered demographic trends, recent development patterns in comparable locations, and potential market demand for new multi-family and commercial uses within the Study Area.

KMA evaluated a total of six (6) market-rate multi-family/mixed-use development prototypes as shown in Exhibit II-1 below. These prototypes range in density from 20 units per acre to 65 units per acre. KMA reviewed characteristics of residential product types with respect to typical unit mixes and sizes within the Study Area and the greater suburban East County sub-region. In KMA's view, these typical unit mixes and sizes reflect the most feasible development parameters for investors/developers in the current market. As shown, the optimal unit size for each development prototype was estimated to range from 800 SF to 1,400 SF. All prototypes were assumed to be developed as rental housing, with the exception of the townhomes (Scenario A), which were modeled as for-sale housing.

Exhibit II-1: Potential Development Prototypes

	Scenario A	Scenario B	Scenario C	Scenario D	Scenario E	Scenario F
Construction Type	*Type V Townhomes*	*Type V Lofts over Commercial*	*Type V Apartments*	*Type V Apartments over Flex Commercial*	*Type V Stacked Flats*	*Type V Stacked Flats over Flex Commercial*
Parking Type	Private Garages	Surface and Attached Garages	Tuck-Under	Tuck-Under	Wrap	Wrap
Product Type	For-Sale	Rental	Rental	Rental	Rental	Rental
Density (units/acre)	20 DU/Ac	25 DU/Ac	45 DU/Ac	45 DU/Ac	65 DU/Ac	65 DU/Ac
Number of Units	40 Units	50 units	45 Units	45 Units	195 Units	195 Units
Unit Mix	2 to 3-Bedroom	Live/Work Lofts	1 to 2-Bedroom	1 to 2-Bedroom	1 to 2-Bedroom	1 to 2-Bedroom
Average Unit Size	1,400 SF	1,000 SF	878 SF	878 SF	800 SF	800 SF

More detailed project descriptions for each development prototype are presented in Table A-1 attached to this memorandum.

B. Estimated Residual Land Values

KMA prepared financial feasibility analyses for each of the six (6) prototypes to determine the residual land value. Residual land value is defined as the maximum land value supported by a proposed development. It can be estimated as the difference between the total development costs, exclusive of land acquisition, and the total supportable private debt and equity investment that can be attracted to the development. Exhibit II-2 illustrates the KMA findings regarding estimated residual land value for each development prototype.

Exhibit II-2: Residual Land Value

	Scenario A	Scenario B	Scenario C	Scenario D	Scenario E	Scenario F
Construction Type	*Type V Townhomes*	*Type V Lofts over Commercial*	*Type V Apartments*	*Type V Apartments over Flex Commercial*	*Type V Stacked Flats*	*Type V Stacked Flats over Flex Commercial*
Parking Type	Private Garages	Surface and Attached Garages	Tuck-Under	Tuck-Under	Wrap	Wrap
Residual Land Value						
Per SF Land	$38	$32	$7	$1	($15)	($40)
Per Unit	$82,000	$55,000	$6,600	$1,000	($10,000)	($27,000)

Key findings of the KMA financial feasibility analysis can be summarized as follows.

- On a per-square-foot basis, the Townhomes with Private Garages and the Lofts with Surface/Attached Garages yielded the highest residual land values ($38 and $32 per SF, respectively). Notably, these prototypes incorporate the least expensive form of parking.

- Apartments with Tuck-Under Parking, with and without ground-floor commercial, resulted in nominally positive land values ($7 and $1 per SF, respectively).

- Residual land values are negative for Stacked Flat Apartments, with and without ground-floor commercial. This finding is not surprising, in that these development prototypes represent the most expensive construction type among the scenarios analyzed.

The detailed KMA financial feasibility analysis is presented in Appendix A attached to this memorandum report.

C. Assessment of Development Potential

KMA conducted a brief survey of sales of older commercial buildings versus vacant land for development of multi-family residential within a 3.0-mile radius of the Study Area. Sales values for older commercial buildings were concentrated between $61 and $104 per SF land. The median sale price was $73 per SF land; the average was $79 per SF land. Conversely, land sales were generally lower, concentrated between $15 and $28 per SF land. The median sale price was $20 per SF land; the average was $24 per SF land.

Based on this review of prevailing acquisition costs for vacant land and "teardown" sites, KMA concludes that most of the multi-family/mixed-use prototypes are not feasible in the near- to mid-term. Generally, the residual land values supported by the development prototypes in the Study Area do not exceed the potential costs to acquire land and demolish existing older commercial buildings that may exist within the Study Area. The most feasible prototypes are Scenario A (Type V Townhomes) and Scenario B (Type V Lofts over Commercial), which involve the least expensive construction type and parking configuration. Further analysis is required to determine which specific sites/commercial buildings in the Study Area may be viable candidates for redevelopment with multi-family or mixed-use developments. Detailed market data with respect to the Study Area is presented in Appendix B attached to this memorandum report.

III. FINANCIAL FEASIBILITY ANALYSIS

The detailed KMA financial pro formas for the development prototypes are presented in Tables A-1 through A-4 attached to this memorandum. The following discussion provides an overview of the pro forma tables contained in each appendix.

A. Project Description

Table A-1 presents the general project description, including gross building area, residential unit mix, and parking type and count, for each development prototype. Exhibit III-1 presents a summary of each scenario's project description. As shown, Scenario A reflects the lowest density product (20 dwelling units per acre), Townhomes with Private Garages, and no commercial space. Conversely, Scenario B is slightly higher in density (25 units per acre) and reflects Live/Work lofts with Surface/Attached Garages over 7,500 SF of commercial. Scenarios C and D reflect Apartments with Tuck-Under parking with a density of 45 units per acre. Scenario D differs from C in that it contains 4,400 SF of commercial. Scenarios E and F reflect Stacked Flats with Wrap parking, the highest density product, of the scenarios analyzed (65 units per acre). Scenario F differs from E in that it contains 25,000 SF of commercial.

Exhibit III-1: Potential Development Prototypes						
	Scenario A	**Scenario B**	**Scenario C**	**Scenario D**	**Scenario E**	**Scenario F**
						
Construction Type	*Type V Townhomes*	*Type V Lofts over Commercial*	*Type V Apartments*	*Type V Apartments over Flex Commercial*	*Type V Stacked Flats*	*Type V Stacked Flats over Flex Commercial*
Parking Type	Private Garages	Surface and Attached Garages	Tuck-Under	Tuck-Under	Wrap	Wrap
Site Area	2.0 Acres	2.0 Acres	1.0 Acre	1.0 Acre	3.0 Acres	3.0 Acres
Product Type	For-Sale	Rental	Rental	Rental	Rental	Rental
Density (units/acre)	20 du/ac	25 du/ac	45 du/ac	45 du/ac	65 du/ac	65 du/ac
Number of Units	40 Units	50 units	45 Units	45 Units	195 Units	195 Units
Unit Mix	2 to 3-Bedroom	Live/Work Lofts	1 to 2-Bedroom	1 to 2-Bedroom	1 to 2-Bedroom	1 to 2-Bedroom
Average Unit Size	1,400 SF	1,000 SF	878 SF	878 SF	800 SF	800 SF
Commercial SF	0 SF	7,500 SF	0 SF	4,400 SF	0 SF	25,000 SF
Parking Spaces	70 Spaces	86 Spaces	72 Spaces	85 Spaces	293 Spaces	368 Spaces
Parking Ratio (per unit)	1.75	1.25	1.60	1.60	1.50	1.50

KMA has also assembled illustrative examples of each development prototype, attached to this memorandum as Appendix C. Exhibit III-2 below presents the illustrative example and the associated prototype scenario. It should be noted that a higher density scenario with Podium parking, similar to Table C-5 – The Atlas, was not evaluated as part of this analysis.

Exhibit III-2: Illustrative Examples vs. Prototype Scenario	
Table Reference/Project	***Prototype Scenario***
Table C-1: XPO Townhomes	Scenario A
Table C-2: Kensington Park Plaza Lofts	Scenario B
Table C-3: Citronica I	Scenarios C & D
Table C-4: West Park Apartments	Scenarios E & F
Table C-5: The Atlas	Scenario Not Analyzed

B. Estimate of Development Costs

Table A-2 presents development costs for each scenario, including direct costs, indirect costs, and financing costs, as described below.

- Direct construction costs consist of items such as on- and off-site improvements, parking, shell construction, residential amenities, tenant improvements, and contingency. For all scenarios, KMA has assumed no payment of prevailing wages. It should also be noted that the KMA analyses do not assume costs associated with demolition or relocation, if applicable.

- Indirect costs consist of architecture, engineering, public permits and fees, legal and accounting, taxes and insurance, developer fee, marketing/lease-up, and contingency.

- Financing costs consist of such items as loan fees, interest during construction and sales/lease-up, and homeowner association dues on unsold units.

C. Project Revenues

Gross sales proceeds and net operating income for the residential and commercial components of each development prototype are presented in Table A-3. The KMA estimates of market prices and rental rates for both the residential and commercial components are based on an assessment of current market conditions and review of current market pricing for comparable developments in the trade area.

D. Estimated Residual Land Value

Table A-4 presents the KMA detailed calculation of residual land value for each prototype. Residual land value is defined as the maximum land payment that a developer could afford to pay for a specified development opportunity based on a comparison of market value upon

completion against total development costs, inclusive of cost of sale and an industry standard developer return requirement.

IV. ASSESSMENT OF DEVELOPMENT POTENTIAL

The County is interested in identifying opportunities for private market reinvestment and redevelopment within the Study Area. The Study Area contains a series of older commercial properties along Campo Road. Recent examples of redevelopment of commercial centers to multi-family/mixed-use projects in the County include: (a) the replacement of the 5.4-acre Bob Baker Ford dealership in Mission Valley with the 305-unit Millennium Apartments; (b) the replacement of a vacant Cadillac dealership in Pacific Beach for the 172-unit Jefferson apartments; and (c) a proposed (application on file) mixed-use project to replace the Poway Fun Bowl and Carriage Shopping Center in the City of Poway. To measure the Study Area's potential for similar redevelopment, KMA compared acquisition costs of older commercial properties to supportable land values for new multi-family/mixed-use development.

KMA surveyed sales of older commercial buildings (built before 1980) and vacant land for development of multi-family residential within a 3.0-mile radius from the Study Area. Sales values for older commercial "teardown" buildings were concentrated between $61 and $104 per SF land, i.e., total acquisition costs for land plus existing building, divided by land area only. The median sale price was $73 per SF land; the average was $79 per SF land. By comparison, vacant land sales were concentrated between $15 and $28 per SF land. The median sale price was $20 per SF land; the average was $24 per SF land. These figures provide a proxy for the potential cost to acquire existing buildings/parcels within the Site. Based on this review of prevailing acquisition costs for vacant land and "teardown" sites, KMA concludes that most of the multi-family/mixed-use prototypes are not feasible in the near- to mid-term. Generally, the residual land values supported by the development prototypes in the Study Area do not exceed the potential costs to acquire land and demolish existing older commercial buildings that may exist within the Study Area. It should be noted that further analysis is required to determine which specific commercial buildings in the Study Area may be ripe for multi-family or mixed-use redevelopment.

V. SENSITIVITY TEST OF KEY VARIABLES

A. Market Rents

As discussed in Section II – Key Findings, the higher-density development scenarios currently generate negative residual land values. However, achievable rental rates and sales values for all of the prototypes can be expected to rise as the Specific Plan is implemented and new

infrastructure improvements and placemaking amenities are installed. As market rents/values grow over time, residual land values can also be anticipated to increase, potentially surpassing estimated acquisition costs, thereby resulting in feasible projects.

B. Affordable Housing

The introduction of affordable housing in the near-term may also support higher-density market-rate housing in the longer term. Comparable experiences in Downtown Lemon Grove, Old Town Temecula, and Vista Village in the City of Vista demonstrate that high-quality affordable housing developments actually served as a catalyst to attract new commercial and market-rate residential development. To varying degrees, initial investment in affordable housing – and infrastructure improvements -- in these districts have preceded private market activity and commercial revitalization.

C. Parking Ratios

A large determinant of residual land value is the type of parking associated with each development prototype, with surface parking and attached garages being significantly less expensive than structured parking (tuck-under or wrap). As shown in Exhibit II-3, reductions in residential and commercial parking ratio requirements increase the residual land value supported by Scenarios C through F. Although the reduction in parking tested below resulted in an increase in residual land value, the increase was not substantial enough to generate financially feasible projects. Due to the relatively low cost of the parking configuration assumed for Scenarios A and B, a reduction in parking ratio would not be expected to have a meaningful impact on project feasibility, therefore reduced parking ratios were not tested for these scenarios. It should be noted that if a parking reduction was permitted as a result of new zoning requirements, the market (i.e., lenders, investors, and ultimately renters/buyers) would still be the main determinant of the minimum required parking for any given development prototype.

Exhibit II-3: Residual Land Value with Adjusted Parking Ratios				
	Scenario C	**Scenario D**	**Scenario E**	**Scenario F**
Construction Type	*Type V Apartments*	*Type V Apartments over Flex Commercial*	*Type V Stacked Flats*	*Type V Stacked Flats over Flex Commercial*
Parking Type	Tuck-Under	Tuck-Under	Wrap	Wrap
Residential Parking Ratio (per unit)	1.60	1.60	1.50	1.50
Commercial Parking Ratio (per 1,000 SF)	3.0	3.0	3.0	3.0
Residual Land Value	**$7/SF**	**$1/SF**	**($15)/SF**	**($40)/SF**
Residential Parking Ratio (per unit)	1.35	1.35	1.25	1.25
Commercial Parking Ratio (per 1,000 SF)	2.0	2.0	2.0	2.0
Residual Land Value	**$11/SF**	**$6/SF**	**($3)/SF**	**($22)/SF**

VI. LIMITING CONDITIONS

1. KMA has made extensive efforts to confirm the accuracy and timeliness of the information contained in this document. Although KMA believes all information in this document is correct, it does not guarantee the accuracy of such and assumes no responsibility for inaccuracies in the information provided by third parties.

2. The findings are based on economic rather than political considerations. Therefore, they should be construed neither as a representation nor opinion that government approvals for development can be secured. No guarantee is made as to the possible effect on development of current or future Federal, State, or local legislation including environmental or ecological matters.

3. The analysis, opinions, recommendations, and conclusions of this document are KMA's informed judgment based on market and economic conditions as of the date of this report. Due to the volatility of market conditions and complex dynamics influencing the economic conditions of the building and development industry, conclusions and recommended actions contained herein should not be relied upon as sole input for final business decisions regarding current and future development and planning.

4. Development opportunities are assumed to be achievable during the specified time frame. A change in development schedule requires that the conclusions contained herein be reviewed for validity. If an unforeseen change occurs in the local or national economy, the analysis and conclusions contained herein may no longer be valid.

5. Any estimates of development costs, project income, and/or value in this evaluation are based on the best available project-specific data as well as the experiences of similar projects. They are not intended to be predictions of the future for the specific project. No warranty or representation is made that any of these estimates or projections will actually materialize.

6. It has been assumed that the value of the property will not be impacted by the presence of any soils, toxic, or hazardous conditions that require remediation to allow development. Additionally, it is assumed that perceived toxic conditions (if any) on surrounding properties will not affect the value of the property.

7. KMA is not advising or recommending any action be taken by the County with respect to any prospective, new or existing municipal financial products or issuance of municipal securities (including with respect to the structure, timing, terms and other similar matters concerning such financial products or issues);

8. KMA is not acting as a municipal advisor to the County and does not assume any fiduciary duty hereunder, including, without limitation, a fiduciary duty to the County pursuant to Section 15B of the Exchange Act with respect to the services provided hereunder and any information and material contained in KMA's work product; and

9. The County shall discuss any such information and material contained in KMA's work product with any and all internal and/or external advisors and experts, including its own municipal advisors, that it deems appropriate before acting on the information and material.

APPENDIX A

FINANCIAL FEASIBILITY ANALYSES

CASA DE ORO
COUNTY OF SAN DIEGO

TABLE A-1

PROJECT DESCRIPTION
CASA DE ORO
COUNTY OF SAN DIEGO

		Scenario A		Scenario B		Scenario C		Scenario D		Scenario E		Scenario F	
													
		Type V Townhomes w/ Private Garages		**Type V Lofts over Commercial w/ Surface and Attached Garages**		**Type V Apartments w/ Tuck-Under Parking**		**Type V Apartments over Flex Commercial w/ Tuck-Under Parking**		**Type V Stacked Flats w/ Wrap Parking**		**Type V Stacked Flats over Flex Commercial w/ Wrap Parking**	
I.	**Site Area**	2.0 Acres		2.0 Acres		1.0 Acres		1.0 Acres		3.0 Acres		3.0 Acres	
II.	**Gross Building Area (GBA)**												
	A. Residential - For-Sale												
	Net Rentable Area	56,000 SF	100%	0 SF	0%	0 SF	0%	0 SF	0%	0 SF	0%	0 SF	0%
	Circulation/Lobby	0 SF	0%	0 SF	0%	0 SF	0%	0 SF	0%	0 SF	0%	0 SF	0%
	Subtotal - Residential - For-Sale	56,000 SF	100%	0 SF	0%	0 SF	0%	0 SF	0%	0 SF	0%	0 SF	0%
	B. Residential - Rental												
	Net Rentable Area	0 SF	0%	50,000 SF	95%	39,500 SF	90%	39,500 SF	90%	156,000 SF	87.5%	156,000 SF	87.5%
	Circulation/Lobby	0 SF	0%	2,632 SF	5%	4,389 SF	10%	4,389 SF	10%	22,286 SF	12.5%	22,286 SF	12.5%
	Subtotal - Residential - Rental	0 SF	0%	52,632 SF	100%	43,889 SF	100%	43,889 SF	100%	178,286 SF	100.0%	178,286 SF	100.0%
	C. Commercial												
	Net Rentable Area	0 SF	0%	6,900 SF	92.5%	0 SF	0%	4,400 SF	100%	0 SF	0%	23,125 SF	92.5%
	Circulation	0 SF	0%	600 SF	7.5%	0 SF	0%	0 SF	0%	0 SF	0%	1,875 SF	7.5%
	Subtotal - Commercial	0 SF	0%	7,500 SF	100.0%	0 SF	0%	4,400 SF	100%	0 SF	0%	25,000 SF	100.0%
	E. Total GBA	56,000 SF		60,132 SF		43,889 SF		48,289 SF		178,286 SF		203,286 SF	
III.	**Number of Units**												
	Live/Work Loft	0 Units	0% 0 SF	50 Units (1)	100% 1,000 SF	0 Units	0% 0 SF	0 Units	0% 0 SF	0 Units	0% 0 SF	0 Units	0% 0 SF
	One Bedroom	0 Units	0% 0 SF	0 Units	0% 0 SF	13 Units	30% 700 SF	13 Units	30% 700 SF	78 Units	40% 650 SF	78 Units	40% 650 SF
	Two Bedroom	16 Units	40% 1,250 SF	0 Units	0% 0 SF	32 Units	70% 950 SF	32 Units	70% 950 SF	117 Units	60% 900 SF	117 Units	60% 900 SF
	Three Bedroom	24 Units	60% 1,500 SF	0 Units	0% 0 SF	0 Units	0% 0 SF	0 Units	0% 0 SF	0 Units	0% 0 SF	0 Units	0% 0 SF
	Total	40 Units	100% 1,400 SF	50 Units	100% 1,000 SF	45 Units	100% 878 SF	45 Units	100% 878 SF	195 Units	100% 800 SF	195 Units	100% 800 SF
IV.	**Density**	20 Units/Acre		25 Units/Acre		45 Units/Acre		45 Units/Acre		65 Units/Acre		65 Units/Acre	
V.	**Number of Stories**	3 Stories		3 Stories		3 Stories		3 Stories		4 Stories		4 Stories	
VI.	**Construction Type**	Type V		Type V		Type V		Type V		Type V		Type V	
VII.	**Parking**												
	Type	Private Garages		Surface and Attached Garages		Tuck-Under Garage		Tuck-Under Garage		Wrap Parking		Wrap Parking	
	Residential Spaces	70 Spaces		63 Spaces		72 Spaces		72 Spaces		293 Spaces		293 Spaces	
	Parking Ratio	1.75 Space/Unit		1.25 Space/Unit		1.60 Space/Unit		1.60 Space/Unit		1.50 Space/Unit		1.50 Space/Unit	
	Commercial Spaces	0 Spaces		23 Spaces		0 Spaces		13 Spaces		0 Spaces		75 Spaces	
	Parking Ratio	3.0 Spaces per 1,000 SF - Commercial		3.0 Spaces per 1,000 SF - Commercial		3.0 Spaces per 1,000 SF - Commercial		3.0 Spaces per 1,000 SF - Commercial		3.0 Spaces per 1,000 SF - Commercial		3.0 Spaces per 1,000 SF - Commercial	

(1) Includes mezzanine and/or alcove sleeping areas.

TABLE A-2

DEVELOPMENT COSTS
CASA DE ORO
COUNTY OF SAN DIEGO

	Scenario A Type V Townhomes w/ Private Garages		Scenario B Type V Lofts over Commercial w/ Surface and Attached Garages		Scenario C Type V Apartments w/ Tuck-Under Parking		Scenario D Type V Apartments over Flex Commercial w/ Tuck-Under Parking		Scenario E Type V Stacked Flats w/ Wrap Parking		Scenario F Type V Stacked Flats over Flex Commercial w/ Wrap Parking	
	Total	**Comments**	**Total**	**Comments**	**Total**	**Comments**	**Total**	**Comments**	**Total**	**Comments**	**Total**	**Comments**
I. Direct Costs (1)												
Off-Site Improvements (2)	$174,000	$2 Per SF Site	$174,000	$2 Per SF Site	$131,000	$3 Per SF Site	$131,000	$3 Per SF Site	$392,000	$3 Per SF Site	$392,000	$3 Per SF Site
On-Site Improvements/Landscaping	$1,307,000	$15 Per SF Site	$2,178,000	$25 Per SF Site	$1,089,000	$25 Per SF Site	$1,089,000	$25 Per SF Site	$5,227,000	$40 Per SF Site	$5,227,000	$40 Per SF Site
Parking	$0	Included Below	$0	Included Below	$900,000	$12,500 Per Space	$1,063,000	$12,500 Per Space	$7,325,000	$25,000 Per Space	$9,200,000	$25,000 Per Space
Shell Construction	$7,840,000	$140 Per SF GBA	$9,922,000	$165 Per SF GBA	$7,242,000	$165 Per SF GBA	$7,968,000	$165 Per SF GBA	$32,983,000	$185 Per SF GBA	$37,608,000	$185 Per SF GBA
Tenant Improvements - Commercial	$0	$0 Per SF Net Rentable	$345,000	$50 Per SF Net Rentable	$0	$0 Per SF Net Rentable	$154,000	$35 Per SF Net Rentable	$0	$0 Per SF Net Rentable	$809,000	$35 Per SF Net Rentable
FF&E/Amenities	$200,000	$5,000 Per Unit	$125,000	$2,500 Per Unit	$225,000	$5,000 Per Unit	$225,000	$5,000 Per Unit	$975,000	$5,000 Per Unit	$975,000	$5,000 Per Unit
Contingency	$476,000	5.0% of Above Directs	$637,000	5.0% of Above Directs	$479,000	5.0% of Above Directs	$532,000	5.0% of Above Directs	$2,345,000	5.0% of Above Directs	$2,711,000	5.0% of Above Directs
Total Direct Costs	$9,997,000	$179 Per SF GBA	$13,381,000	$223 Per SF GBA	$10,066,000	$229 Per SF GBA	$11,162,000	$231 Per SF GBA	$49,247,000	$276 Per SF GBA	$56,922,000	$280 Per SF GBA
II. Indirect Costs												
Architecture & Engineering	$600,000	6.0% of Directs	$803,000	6.0% of Directs	$604,000	6.0% of Directs	$670,000	6.0% of Directs	$2,462,000	5.0% of Directs	$2,846,000	5.0% of Directs
Permits & Fees - Residential (2)	$1,120,000	$20 Per SF GBA	$1,316,000	$25 Per SF GBA	$1,097,000	$25 Per SF GBA	$1,097,000	$25 Per SF GBA	$4,457,000	$25 Per SF GBA	$4,457,000	$25 Per SF GBA
Permits & Fees - Non-Residential (2)	$0	$0 Per SF GBA	$38,000	$5 Per SF GBA	$0	$0 Per SF GBA	$22,000	$5 Per SF GBA	$0	$0 Per SF GBA	$125,000	$5 Per SF GBA
Legal & Accounting	$150,000	1.5% of Directs	$201,000	1.5% of Directs	$151,000	1.5% of Directs	$167,000	1.5% of Directs	$739,000	1.5% of Directs	$854,000	1.5% of Directs
Taxes & Insurance	$150,000	1.5% of Directs	$201,000	1.5% of Directs	$151,000	1.5% of Directs	$167,000	1.5% of Directs	$739,000	1.5% of Directs	$854,000	1.5% of Directs
Developer Fee	$400,000	4.0% of Directs	$535,000	4.0% of Directs	$403,000	4.0% of Directs	$446,000	4.0% of Directs	$1,970,000	4.0% of Directs	$2,277,000	4.0% of Directs
Marketing/Lease-Up - Residential	$100,000	$2,500 Per Unit	$125,000	$2,500 Per Unit	$113,000	$2,500 Per Unit	$113,000	$2,500 Per Unit	$488,000	$2,500 Per Unit	$488,000	$2,500 Per Unit
Marketing/Lease-Up - Non-Residential	$0	$0 Per SF Net Rentable	$69,000	$10 Per SF Net Rentable	$0	$0 Per SF Net Rentable	$44,000	$10 Per SF Net Rentable	$0	$0 Per SF Net Rentable	$231,000	$10 Per SF Net Rentable
Contingency	$126,000	5.0% of Above Indirects	$164,000	5.0% of Above Indirects	$126,000	5.0% of Above Indirects	$136,000	5.0% of Above Indirects	$543,000	5.0% of Above Indirects	$607,000	5.0% of Above Indirects
Total Indirect Costs	$2,646,000	26% of Directs	$3,452,000	26% of Directs	$2,645,000	26% of Directs	$2,862,000	26% of Directs	$11,398,000	23% of Directs	$12,739,000	22% of Directs
III. Financing Costs	$750,000	7.50% of Directs	$1,004,000	7.50% of Directs	$755,000	7.50% of Directs	$837,000	7.50% of Directs	$3,694,000	7.50% of Directs	$4,269,000	7.50% of Directs
IV. Development Costs (Excl. Acquisition)	**$13,393,000**	**$239 Per SF GBA**	**$17,837,000**	**$297 Per SF GBA**	**$13,466,000**	**$307 Per SF GBA**	**$14,861,000**	**$308 Per SF GBA**	**$64,339,000**	**$361 Per SF GBA**	**$73,930,000**	**$364 Per SF GBA**
		$335,000 Per Unit		**$357,000 Per Unit**		**$299,000 Per Unit**		**$330,000 Per Unit**		**$330,000 Per Unit**		**$379,000 Per Unit**

(1) Does not assume the payment of prevailing wages.
(2) Preliminary estimate; not verified by KMA or County.

TABLE A-3

NET SALES PROCEEDS - FOR-SALE
CASA DE ORO
COUNTY OF SAN DIEGO

	Scenario A Type V Townhomes w/ Private Garages				
	Unit Size	**# Units**	**$/SF**	**Price/Unit**	**Total**
I. Gross Sales Proceeds					
Two Bedroom	1,250 SF	16	$360	$450,000	$7,200,000
Three Bedroom	1,500 SF	24	$345	$518,000	$12,432,000
Total/Average	1,400 SF	40	$351	$491,000	$19,632,000
II. Net Sales Proceeds					**$19,632,000**

TABLE A-3 (CONT'D.)

NET OPERATING INCOME - RENTAL
CASA DE ORO
COUNTY OF SAN DIEGO

	Scenario B Type V Lofts over Commercial w/ Surface and Attached Garages					Scenario C Type V Apartments w/ Tuck-Under Parking					Scenario D Type V Apartments over Flex Commercial w/ Tuck-Under Parking					Scenario E Type V Stacked Flats w/ Wrap Parking					Scenario F Type V Stacked Flats over Flex Commercial w/ Wrap Parking				
	Unit Size	# Units	$/SF	Monthly Rent	Total Annual	Unit Size	# Units	$/SF	Monthly Rent	Total Annual	Unit Size	# Units	$/SF	Monthly Rent	Total Annual	Unit Size	# Units	$/SF	Monthly Rent	Total Annual	Unit Size	# Units	$/SF	Monthly Rent	Total Annual
I. Gross Scheduled Income (GSI)																									
Live/Work Loft @	1,000 SF	50	$2.45	$2,450	$1,470,000	0 SF	0	$0.00	$0	$0	0 SF	0	$0.00	$0	$0	0 SF	0	$0.00	$0	$0	0 SF	0	$0.00	$0	$0
One Bedroom @	0 SF	0	$0.00	$0	$0	700 SF	13	$2.55	$1,785	$278,000	700 SF	13	$2.55	$1,785	$278,000	650 SF	78	$2.85	$1,853	$1,734,000	650 SF	78	$2.85	$1,853	$1,734,000
Two Bedroom @	0 SF	0	$0.00	$0	$0	950 SF	32	$2.30	$2,185	$839,000	950 SF	32	$2.30	$2,185	$839,000	900 SF	117	$2.60	$2,340	$3,285,000	900 SF	117	$2.60	$2,340	$3,285,000
Total/Average	1,000 SF	50	$2.45	$2,450	$1,470,000	878 SF	45	$2.36	$2,069	$1,117,000	878 SF	45	$2.36	$2,069	$1,117,000	800 SF	195	$2.68	$2,145	$5,019,000	800 SF	195	$2.68	$2,145	$5,019,000
Add: Other Income		$50	/Unit/Month		$30,000		$75	/Unit/Month		$41,000		$75	/Unit/Month		$41,000		$100	/Unit/Month		$234,000		$100	/Unit/Month		$234,000
Total GSI					$1,500,000					$1,158,000					$1,158,000					$5,253,000					$5,253,000
(Less) Vacancy		5.0%	of GSI		($75,000)		5.0%	of GSI		($58,000)		5.0%	of GSI		($58,000)		5.0%	of GSI		($263,000)		5.0%	of GSI		($263,000)
Effective Gross Income (EGI)					$1,425,000					$1,100,000					$1,100,000					$4,990,000					$4,990,000
II. Operating Expense																									
(Less) Operating Expense		$4,000	/Unit/Year		($200,000)		$4,500	/Unit/Year		($203,000)		$4,500	/Unit/Year		($203,000)		$4,750	/Unit/Year		($926,000)		$4,750	/Unit/Year		($926,000)
(Less) Property Taxes (1)		$4,760	/Unit/Year		($238,000)		$3,867	/Unit/Year		($174,000)		$3,867	/Unit/Year		($174,000)		$4,046	/Unit/Year		($789,000)		$4,046	/Unit/Year		($789,000)
(Less) Replacement Reserves		$250	/Unit/Year		($13,000)		$250	/Unit/Year		($11,000)		$250	/Unit/Year		($11,000)		$250	/Unit/Year		($49,000)		$250	/Unit/Year		($49,000)
Total Expenses		$9,010	/Unit/Year		($451,000)		$8,617	/Unit/Year		($388,000)		$8,617	/Unit/Year		($388,000)		$9,046	/Unit/Year		($1,764,000)		$9,046	/Unit/Year		($1,764,000)
		32%	of EGI				35%	of EGI				35%	of EGI				35%	of EGI				35%	of EGI		
III. Net Operating Income					**$974,000**					**$712,000**					**$712,000**					**$3,226,000**					**$3,226,000**

(1) Based on capitalized income approach; assumes a 4.5% capitalization rate and 1.10% tax rate.

TABLE A-3 (CONT'D.)

NET OPERATING INCOME - COMMERCIAL
CASA DE ORO
COUNTY OF SAN DIEGO

	Scenario B Type V Lofts over Commercial w/ Surface and Attached Garages			Scenario D Type V Apartments over Flex Commercial w/ Tuck-Under Parking			Scenario F Type V Stacked Flats over Flex Commercial w/ Wrap Parking		
	Rentable SF	$/SF/Month	Total Annual	Rentable SF	$/SF/Month	Total Annual	Rentable SF	$/SF/Month	Total Annual
I. Net Operating Income									
A. Commercial									
Gross Scheduled Income	6,900 SF	$2.00 /SF NNN	$166,000	4,400 SF	$2.00 /SF NNN	$106,000	23,125 SF	$2.00 /SF NNN	$555,000
(Less) Vacancy		15.0% of GSI	($25,000)		15.0% of GSI	($16,000)		10.0% of GSI	($56,000)
Total Effective Gross Income (EGI)			$141,000			$90,000			$499,000
(Less) Unreimbursed Operating Expenses		5.0% of GSI	($8,000)		5.0% of GSI	($5,000)		5.0% of GSI	($28,000)
B. Net Operating Income			**$133,000**			**$85,000**			**$471,000**

TABLE A-4

RESIDUAL LAND VALUE
CASA DE ORO
COUNTY OF SAN DIEGO

	Scenario A Type V Townhomes w/ Private Garages	Scenario B Type V Lofts over Commercial w/ Surface and Attached Garages	Scenario C Type V Apartments w/ Tuck-Under Parking	Scenario D Type V Apartments over Flex Commercial w/ Tuck-Under Parking	Scenario E Type V Stacked Flats w/ Wrap Parking	Scenario F Type V Stacked Flats over Flex Commercial w/ Wrap Parking
I. Net Sales Proceeds						
A. Residential - For-Sale						
Gross Sales Proceeds	$19,632,000					
(Less) Cost of Sale	3.0% of Value ($589,000)					
(Less) Target Developer Profit	12.0% of Value ($2,356,000)					
Net Sales Proceeds - Residential - For-Sale	$16,687,000	*Not Applicable*	*Not Applicable*	*Not Applicable*	*Not Applicable*	*Not Applicable*
B. Residential - Rental						
Stabilized Net Operating Income		$974,000	$712,000	$712,000	$3,226,000	$3,226,000
Capitalization Rate @		4.50%	4.50%	4.50%	4.50%	4.50%
Capitalized Value Upon Completion		$21,644,000	$15,822,000	$15,822,000	$71,689,000	$71,689,000
(Less) Cost of Sale		3.0% of Value ($649,000)	3.0% of Value ($475,000)	3.0% of Value ($475,000)	3.0% of Value ($2,151,000)	3.0% of Value ($2,151,000)
(Less) Target Developer Profit		10.0% of Value ($2,164,000)	10.0% of Value ($1,582,000)	10.0% of Value ($1,582,000)	10.0% of Value ($7,169,000)	10.0% of Value ($7,169,000)
Net Sales Proceeds - Residential - Rental	*Not Applicable*	$18,831,000	$13,765,000	$13,765,000	$62,369,000	$62,369,000
C. Commercial						
Stabilized Net Operating Income		$133,000		$85,000		$471,000
Capitalization Rate @		6.50%		6.50%		6.50%
Capitalized Value Upon Completion		$2,046,000		$1,308,000		$7,246,000
(Less) Cost of Sale		3.0% of Value ($61,000)		3.0% of Value ($39,000)		3.0% of Value ($217,000)
(Less) Target Developer Profit		10.0% of Value ($205,000)		10.0% of Value ($131,000)		10.0% of Value ($725,000)
Net Sales Proceeds - Commercial	*Not Applicable*	$1,780,000	*Not Applicable*	$1,138,000	*Not Applicable*	$6,304,000
II. Total Net Sales Proceeds	$16,687,000	$20,611,000	$13,765,000	$14,903,000	$62,369,000	$68,673,000
(Less) Development Costs	($13,393,000)	($17,837,000)	($13,466,000)	($14,861,000)	($64,339,000)	($73,930,000)
III. Residual Land Value	**$3,294,000**	**$2,774,000**	**$299,000**	**$42,000**	**($1,970,000)**	**($5,257,000)**
Per Unit	**$82,000**	**$55,000**	**$6,600**	**$1,000**	**($10,000)**	**($27,000)**
Per SF Site	**$38**	**$32**	**$7**	**$1**	**($15)**	**($40)**

APPENDIX B

MARKET AND INDUSTRY DATA

CASA DE ORO
COUNTY OF SAN DIEGO

TABLE B-1

MULTI-FAMILY LAND SALES, JANUARY 2014 TO PRESENT (1)
CASA DE ORO
COUNTY OF SAN DIEGO

Sale Date	Address	City	Sale Price	Land Area (Acres)	# of Units	Units/ Acre	$/SF Land	$/Unit
03/24/17	120 Ballantyne St	El Cajon	$510,000	0.18	8	44	$65	$63,750
01/04/19	8585 La Mesa Blvd	La Mesa	$9,395,000	4.41	130	29	$49	$72,269
11/04/14	2752-2764 Lake Pointe Dr	Spring Valley	$6,250,000	5.08	88	17	$28	$71,023
07/18/18	7930 Hillside Dr	La Mesa	$500,000	0.44	17	39	$26	$29,412
06/20/18	2059 Sweetwater Rd	Spring Valley	$837,500	0.82	8	10	$23	$104,688
10/01/15	230 S Sunshine Ave	El Cajon	$1,040,000	1.07	70	65	$22	$14,857
09/27/16	8373-8385 Broadway St	Lemon Grove	$2,500,000	2.88	68	24	$20	$36,765
12/02/19	2445 Lemon Grove Ave	Lemon Grove	$335,000	0.41	9	22	$19	$37,222
05/01/18	6768 Akins Ave	San Diego	$350,000	0.49	6	12	$16	$59,609
10/31/14	8465 Broadway	Lemon Grove	$325,000	0.51	29	57	$15	$11,207
10/05/15	8200 Hilltop Dr	Lemon Grove	$159,000	0.25	6	24	$15	$26,500
07/31/15	8137 Cascio Ct	Lemon Grove	$329,000	0.73	12	16	$10	$27,417
12/10/14	6645 Jonel Way	Bonita	$1,875,000	20.00	90	5	$2	$20,833
		Minimum	$159,000	0.18	6	5	$2	$11,207
		Maximum	$9,395,000	20.00	130	65	$65	$104,688
		Median	$510,000	0.73	17	24	$20	$36,765
		Average	$1,877,346	2.87	42	28	$24	$44,273

(1) Reflects apartment/multi-family land sales within a 3.0-mile radius from the Casa de Oro Center.

Source: CoStar Group, Inc.

TABLE B-2

MULTI-FAMILY LAND SALES, JANUARY 2014 TO PRESENT (1)
CASA DE ORO
COUNTY OF SAN DIEGO

Sale Date	Address	City	Sale Price	Land Area (Acres)	# of Units	Units/ Acre	$/SF Land	$/Unit
06/20/18	2059 Sweetwater Rd	Spring Valley	$837,500	0.82	8	10	$23	$104,688
01/04/19	8585 La Mesa Blvd	La Mesa	$9,395,000	4.41	130	29	$49	$72,269
11/04/14	2752-2764 Lake Pointe Dr	Spring Valley	$6,250,000	5.08	88	17	$28	$71,023
03/24/17	120 Ballantyne St	El Cajon	$510,000	0.18	8	44	$65	$63,750
05/01/18	6768 Akins Ave	San Diego	$350,000	0.49	6	12	$16	$59,609
12/02/19	2445 Lemon Grove Ave	Lemon Grove	$335,000	0.41	9	22	$19	$37,222
09/27/16	8373-8385 Broadway St	Lemon Grove	$2,500,000	2.88	68	24	$20	$36,765
07/18/18	7930 Hillside Dr	La Mesa	$500,000	0.44	17	39	$26	$29,412
07/31/15	8137 Cascio Ct	Lemon Grove	$329,000	0.73	12	16	$10	$27,417
10/05/15	8200 Hilltop Dr	Lemon Grove	$159,000	0.25	6	24	$15	$26,500
12/10/14	6645 Jonel Way	Bonita	$1,875,000	20.00	90	5	$2	$20,833
10/01/15	230 S Sunshine Ave	El Cajon	$1,040,000	1.07	70	65	$22	$14,857
10/31/14	8465 Broadway	Lemon Grove	$325,000	0.51	29	57	$15	$11,207
		Minimum	$159,000	0.18	6	5	$2	$11,207
		Maximum	$9,395,000	20.00	130	65	$65	$104,688
		Median	$510,000	0.73	17	24	$20	$36,765
		Average	$1,877,346	2.87	42	28	$24	$44,273

(1) Reflects apartment/multi-family land sales within a 3.0-mile radius from the Casa de Oro Center.

Source: CoStar Group, Inc.

TABLE B-3

COMMERCIAL BUILDING SALES, JANUARY 2018 TO PRESENT (1) (2)
CASA DE ORO
COUNTY OF SAN DIEGO

Sale Date	Address	City	Sale Price	Land Area (Acres)	Building Area (SF)	$/SF Land	$/SF Building Area	Year Built	Property Type
02/15/19	9149 Harness St	Spring Valley	$769,500	0.25	1,000	$71	$770	1952	Specialty
02/26/19	8303 Parkway Dr	La Mesa	$735,000	0.19	1,367	$89	$538	1965	Retail
08/24/18	8354 University Ave	La Mesa	$760,000	0.16	1,425	$112	$533	1931	Office
11/27/18	2615 Sweetwater Springs Blvd	Spring Valley	$5,900,000	0.95	11,342	$143	$520	1940	Strip Center
10/05/18	8126 Center St	La Mesa	$1,035,000	0.94	2,200	$25	$470	1955	Retail
03/07/18	8170 Parkway Dr	La Mesa	$1,125,000	0.28	2,640	$93	$426	1980	Retail
03/05/18	8489 La Mesa Blvd	La Mesa	$655,000	0.16	1,671	$94	$392	1930	Office
05/22/19	5270 Jackson Dr	La Mesa	$5,300,000	1.35	14,263	$90	$372	1977	Retail
05/31/19	7735 University Ave	La Mesa	$1,000,000	0.22	2,820	$104	$355	1975	Retail
07/26/19	8029 La Mesa Blvd	La Mesa	$809,000	0.14	2,300	$133	$352	1971	Office
02/02/18	8354 University Ave	La Mesa	$440,000	0.16	1,425	$65	$309	1931	Office
04/26/19	7871 University Ave	La Mesa	$900,000	0.29	3,086	$71	$292	1977	Office
03/06/19	3434 Grove St	Lemon Grove	$1,450,000	0.50	5,160	$67	$281	1963	Office
05/11/18	2757 Lemon Grove Ave	Lemon Grove	$450,000	0.26	1,700	$40	$265	1974	Retail
11/15/18	7770 Broadway Blvd	Lemon Grove	$1,650,000	0.62	6,400	$61	$258	1980	Retail
09/24/18	7735 University Ave	La Mesa	$700,000	0.22	2,820	$73	$248	1975	Retail
09/24/18	7735 University Ave	La Mesa	$700,000	0.22	2,820	$73	$248	1975	Retail
10/12/18	566 Paraiso Ave	Spring Valley	$1,283,000	0.41	6,000	$72	$214	1979	Retail
10/23/18	3276-3282 Main St	Lemon Grove	$750,000	0.17	3,850	$103	$195	1952	Retail
03/02/18	9070 Jamacha Rd	Spring Valley	$680,000	0.55	4,583	$28	$148	1954	Retail
08/15/18	7904 Broadway	Lemon Grove	$400,000	0.09	2,775	$102	$144	1930	Retail
03/22/19	8818 Troy St	Spring Valley	$315,000	0.05	2,346	$145	$134	1978	Retail
01/23/18	8753 Campo Rd	La Mesa	$900,000	0.45	6,750	$46	$133	1975	Office
10/01/19	2855 Lemon Grove Ave	Lemon Grove	$522,500	0.10	4,270	$120	$122	1957	Retail
03/08/18	4400 Palm Ave	La Mesa	$1,050,000	1.48	9,600	$16	$109	1968	Office
03/28/18	9927 Campo Rd	Spring Valley	$295,000	0.11	3,200	$62	$92	1948	Retail
05/23/18	10786 U S Elevator Rd	Spring Valley	$5,180,000	4.41	56,376	$27	$92	1974	Specialty
		Minimum	$295,000	0.05	1,000	$16	$92	1930	
		Maximum	$5,900,000	4.41	56,376	$145	$770	1980	
		Median	$769,500	0.25	2,820	$73	$265	1968	
		Average	$1,324,222	0.55	6,081	$79	$297	1962	

(1) Reflects commercial building sales within a 3.0-mile radius from the Casa de Oro Center.
(2) Built before 1980.

Source: CoStar Group, Inc.

SORT BY $/SF
LAND AREA

TABLE B-4

COMMERCIAL BUILDING SALES, JANUARY 2018 TO PRESENT (1) (2)
CASA DE ORO
COUNTY OF SAN DIEGO

Sale Date	Address	City	Sale Price	Land Area (Acres)	Building Area (SF)	$/SF Land	$/SF Building Area	Year Built	Property Type
03/22/19	8818 Troy St	Spring Valley	$315,000	0.05	2,346	$145	$134	1978	Retail
11/27/18	2615 Sweetwater Springs Blvd	Spring Valley	$5,900,000	0.95	11,342	$143	$520	1940	Strip Center
07/26/19	8029 La Mesa Blvd	La Mesa	$809,000	0.14	2,300	$133	$352	1971	Office
10/01/19	2855 Lemon Grove Ave	Lemon Grove	$522,500	0.10	4,270	$120	$122	1957	Retail
08/24/18	8354 University Ave	La Mesa	$760,000	0.16	1,425	$112	$533	1931	Office
05/31/19	7735 University Ave	La Mesa	$1,000,000	0.22	2,820	$104	$355	1975	Retail
10/23/18	3276-3282 Main St	Lemon Grove	$750,000	0.17	3,850	$103	$195	1952	Retail
08/15/18	7904 Broadway	Lemon Grove	$400,000	0.09	2,775	$102	$144	1930	Retail
03/05/18	8489 La Mesa Blvd	La Mesa	$655,000	0.16	1,671	$94	$392	1930	Office
03/07/18	8170 Parkway Dr	La Mesa	$1,125,000	0.28	2,640	$93	$426	1980	Retail
05/22/19	5270 Jackson Dr	La Mesa	$5,300,000	1.35	14,263	$90	$372	1977	Retail
02/26/19	8303 Parkway Dr	La Mesa	$735,000	0.19	1,367	$89	$538	1965	Retail
09/24/18	7735 University Ave	La Mesa	$700,000	0.22	2,820	$73	$248	1975	Retail
09/24/18	7735 University Ave	La Mesa	$700,000	0.22	2,820	$73	$248	1975	Retail
10/12/18	566 Paraiso Ave	Spring Valley	$1,283,000	0.41	6,000	$72	$214	1979	Retail
04/26/19	7871 University Ave	La Mesa	$900,000	0.29	3,086	$71	$292	1977	Office
02/15/19	9149 Harness St	Spring Valley	$769,500	0.25	1,000	$71	$770	1952	Specialty
03/06/19	3434 Grove St	Lemon Grove	$1,450,000	0.50	5,160	$67	$281	1963	Office
02/02/18	8354 University Ave	La Mesa	$440,000	0.16	1,425	$65	$309	1931	Office
03/28/18	9927 Campo Rd	Spring Valley	$295,000	0.11	3,200	$62	$92	1948	Retail
11/15/18	7770 Broadway Blvd	Lemon Grove	$1,650,000	0.62	6,400	$61	$258	1980	Retail
01/23/18	8753 Campo Rd	La Mesa	$900,000	0.45	6,750	$46	$133	1975	Office
05/11/18	2757 Lemon Grove Ave	Lemon Grove	$450,000	0.26	1,700	$40	$265	1974	Retail
03/02/18	9070 Jamacha Rd	Spring Valley	$680,000	0.55	4,583	$28	$148	1954	Retail
05/23/18	10786 U S Elevator Rd	Spring Valley	$5,180,000	4.41	56,376	$27	$92	1974	Specialty
10/05/18	8126 Center St	La Mesa	$1,035,000	0.94	2,200	$25	$470	1955	Retail
03/08/18	4400 Palm Ave	La Mesa	$1,050,000	1.48	9,600	$16	$109	1968	Office
		Minimum	$295,000	0.05	1,000	$16	$92	1930	
		Maximum	$5,900,000	4.41	56,376	$145	$770	1980	
		Median	$769,500	0.25	2,820	$73	$265	1968	
		Average	$1,324,222	0.55	6,081	$79	$297	1962	

(1) Reflects commercial building sales within a 3.0-mile radius from the Casa de Oro Center.
(2) Built before 1980.

Source: CoStar Group, Inc.

TABLE B-5

SURVEY OF APARTMENT MARKET RENTS, DECEMBER 2019 (1) (2)
CASA DE ORO
COUNTY OF SAN DIEGO

					One Bedroom			Two Bedroom			Three Bedroom			
Apartment Complex	**Address**	**Zip Code**	**Stories**	**# Units**	**SF**	**Rent**	**Rent/SF**	**SF**	**Rent**	**Rent/SF**	**SF**	**Rent**	**Rent/SF**	**Year Built**
CELSIUS	100 Citronica Ln	91945	4	102	798	$1,950	$2.44	1,196	$2,464	$2.06	-	-	-	2017
The District Apartments	8707-8747 Fletcher Pky	91942	4	527	726	$2,651	$3.65	1,265	$3,766	$2.98	-	-	-	2010
Villa Toscana	1451 Brabham St	92019	2	116	866	$1,695	$1.96	1,145	$1,945	$1.70	1,315	$2,245	$1.71	2000
Canyon View	7149 Navajo Rd	92119	3	183	834	$1,870	$2.24	1,081	$2,250	$2.08	-	-	-	2002
FiftyOne Baltimore	5150 Baltimore Dr	91942	3	66	678	$1,809	$2.67	948	$2,356	$2.49	-	-	-	2017
SETA	7346 Parkway Dr	91942	3	198	846	$3,185	$3.76	1,096	$5,188	$4.73	1,369	$5,709	$4.17	2016
The Quarry	4330-4350 Palm Ave	91941	3	61	638	$1,715	$2.69	-	-	-	-	-	-	2015
BLVD63	6345 El Cajon Blvd	92115	4	332	518	$1,785	$3.45	1,084	$1,608	$1.48	1,268	$2,258	$1.78	2014
		Minimum	2	61	518	$1,695	$1.96	948	$1,608	$1.48	1,268	$2,245	$1.71	2000
		Maximum	4	527	866	$3,185	$3.76	1,265	$5,188	$4.73	1,369	$5,709	$4.17	2017
		Median	3	150	762	$1,840	$2.68	1,096	$2,356	$2.08	1,315	$2,258	$1.78	2015
		Average	3	198	738	$2,083	$2.86	1,116	$2,797	$2.50	1,317	$3,404	$2.55	2011

(1) Reflects multi-family product within 5.0 miles of the Casa de Oro Center.
(2) Built after 2000.

Source: apartments.com

TABLE B-6

SURVEY OF FOR-SALE ATTACHED RESIDENTIAL SALES (1)
CASA DE ORO
COUNTY OF SAN DIEGO

Address	Property Type	City/Community	Zip Code	Sales Price	Bed	Bath	Square Feet (SF)	$/SF	Year Built
6101 Adelaide #119	Condo/Co-op	San Diego	92115	$188,900	0.0	1.0	304	$621	1984
6997-99 Mt Vernon St	Multi-Family (2-4 Unit)	Lemon Grove	91945	$629,000	5.0	2.0	1,525	$412	1960
11523 Fury Ln #111	Condo/Co-op	El Cajon	92019	$349,900	2.0	2.0	852	$411	1989
1160 E Lexington Ave #5	Condo/Co-op	El Cajon	92019	$189,000	1.0	1.0	463	$408	1995
1935 Terracina Cir	Condo/Co-op	Spring Valley	91977	$349,000	2.0	1.0	858	$407	1973
9860 Dale Ave Unit C10	Townhouse	Spring Valley	91977	$239,900	1.0	1.0	600	$400	1979
8816 La Mesa Blvd	Multi-Family (2-4 Unit)	La Mesa	91942	$739,900	3.0	3.0	1,878	$394	1943
11525 Fury Ln #93	Condo/Co-op	El Cajon	92019	$375,000	2.0	2.0	970	$387	1989
9860 Dale Ave Unit D3	Townhouse	Spring Valley	91977	$229,900	1.0	1.0	600	$383	1979
6735 Amherst St Unit 3E	Townhouse	San Diego	92115	$280,000	2.0	1.5	734	$381	1980
10235 Madrid Way #129	Townhouse	Spring Valley	91977	$265,000	2.0	1.5	700	$379	1985
2147 Citrus Tree Ln	Condo/Co-op	Spring Valley	91977	$445,000	2.0	2.0	1,183	$376	1979
11576 Fury Ln Unit 142	Condo/Co-op	El Cajon	92019	$314,900	2.0	2.0	852	$370	1989
11580 Fury Ln #165	Condo/Co-op	El Cajon	92019	$309,900	2.0	2.0	852	$364	1988
10079 Nuerto Ln	Townhouse	Spring Valley	91977	$425,000	3.0	2.0	1,183	$359	1980
8036-38 Lemon Ave	Multi-Family (2-4 Unit)	La Mesa	91941	$825,000	4.0	3.0	2,298	$359	1979
1160 E E Lexington Ave #10	Condo/Co-op	El Cajon	92019	$199,900	1.0	1.0	560	$357	1995
11380 Via Rancho San Diego Unit F	Condo/Co-op	El Cajon	92019	$405,000	2.0	2.0	1,136	$357	1993
8828 Terrarama Ave	Condo/Co-op	Spring Valley	91977	$399,900	3.0	1.5	1,125	$355	1973
3621 Avocado Vlg #94	Condo/Co-op	La Mesa	91941	$355,000	2.0	1.0	1,012	$351	1985
2914 Elm Tree Ct	Condo/Co-op	Spring Valley	91978	$320,000	2.0	2.0	916	$349	1986
4947-4949 Clearview Way	Multi-Family (2-4 Unit)	La Mesa	91942	$575,000	4.0	2.0	1,652	$348	1959
4514 3rd St E #14	Townhouse	La Mesa	91941	$345,000	2.0	1.5	1,002	$344	1963
4515 4th St #3	Condo/Co-op	La Mesa	91941	$349,000	3.0	2.0	1,017	$343	1977
7705 El Cajon B. #2	Townhouse	La Mesa	91942	$439,000	2.0	2.5	1,285	$342	2006
3053 Gayla Ct	Condo/Co-op	Spring Valley	91978	$549,000	3.0	2.0	1,617	$340	1982
11523 Fury Ln #107	Condo/Co-op	El Cajon	92019	$329,000	2.0	2.0	970	$339	1989
8145-47 Helm St	Multi-Family (2-4 Unit)	San Diego	92114	$575,000	6.0	2.0	1,700	$338	1953
8360 University Ave	Multi-Family (2-4 Unit)	La Mesa	91942	$875,000	5.0	4.0	2,596	$337	1932
4779 71St St	Multi-Family (2-4 Unit)	La Mesa	91942	$1,179,000	6.0	4.0	3,498	$337	2019
314-318 W Cypress Ave	Multi-Family (2-4 Unit)	El Cajon, CA 92020	92020	$655,888	5.0	3.0	1,950	$336	1950
5350 Baltimore Dr #34	Condo/Co-op	La Mesa	91942	$322,000	2.0	2.0	967	$333	1972
8625 Lake Murray Blvd #6	Condo/Co-op	San Diego	92119	$319,900	2.0	2.0	973	$329	1975
1536 Granite Hls Unit F	Condo/Co-op	El Cajon	92019	$357,000	2.0	2.0	1,087	$328	1983
6955 Alvarado Rd #49	Condo/Co-op	San Diego	92120	$285,000	2.0	2.0	876	$325	1970
8220 Vincetta Dr #63	Townhouse	La Mesa	91942	$325,000	2.0	2.0	999	$325	1970
5800 Lake Murray Blvd #85	Townhouse	La Mesa	91942	$499,000	3.0	2.0	1,554	$321	1974
8117 Paradise Valley Ct	Condo/Co-op	Spring Valley	91977	$309,500	3.0	2.0	975	$317	1979
530 65th St #308	Condo/Co-op	San Diego	92114	$234,900	2.0	1.0	740	$317	1989
8765 Lake Murray Blvd #10	Townhouse	San Diego	92119	$329,900	2.0	1.0	1,041	$317	1972
3585 Grove #147	Condo/Co-op	Lemon Grove	91945	$319,000	2.0	2.0	1,022	$312	2004
8785 Navajo Rd #10	Condo/Co-op	San Diego	92119	$324,900	2.0	1.0	1,041	$312	1972
294 Chambers St #33	Condo/Co-op	El Cajon	92020	$225,000	1.0	1.0	722	$312	1974
1000 Estes St #7	Condo/Co-op	El Cajon	92020	$268,000	2.0	1.5	860	$312	1981
5430 Baltimore Dr #81	Condo/Co-op	La Mesa	91942	$429,000	3.0	2.5	1,394	$308	1974
2203 KINGS VIEW Cir	Townhouse	Spring Valley	91977	$312,000	2.0	2.5	1,020	$306	1994
589 N Johnson Ave #106	Condo/Co-op	El Cajon	92020	$269,900	2.0	1.0	883	$306	1980
512 S Anza St	Condo/Co-op	El Cajon	92020	$275,000	2.0	1.5	900	$306	1979
7855 Cowles Mountain Ct Unit A18	Condo/Co-op	San Diego	92119	$319,995	2.0	2.0	1,048	$305	1971
6434 Akins #512	Condo/Co-op	San Diego	92114	$225,000	2.0	1.0	740	$304	1989
6955 Alvarado #76	Condo/Co-op	San Diego	92120	$265,000	2.0	2.0	879	$301	1970
589 N Johnson Ave #137	Condo/Co-op	El Cajon	92020	$265,000	2.0	1.0	883	$300	1980
732 E Lexington Ave #6	Condo/Co-op	El Cajon	92020	$269,900	2.0	1.0	910	$297	1978
1647 Manzana Way	Townhouse	San Diego	92139	$420,000	3.0	2.5	1,428	$294	1984
2000 Crofton St Spc 37	Condo/Co-op	Spring Valley	91977	$299,900	3.0	2.0	1,022	$293	2004
425 S Meadowbrook Dr #131	Townhouse	San Diego	92114	$425,000	2.0	2.5	1,452	$293	2007
3313 Dehesa Rd #88	Condo/Co-op	El Cajon	92019	$399,000	2.0	2.0	1,371	$291	2001
471 Ballantyne St #55	Condo/Co-op	El Cajon	92020	$269,000	2.0	1.5	925	$291	1987
438 S ANZA	Townhouse	El Cajon	92020	$260,000	2.0	1.5	900	$289	1978
8767 Navajo Rd #12	Condo/Co-op	San Diego	92119	$320,000	2.0	2.0	1,114	$287	1972
510-514 Emerald Ave	Multi-Family (2-4 Unit)	El Cajon	92020	$829,000	8.0	4.0	2,900	$286	1959
3557 Kenora #32	Condo/Co-op	Spring Valley	91977	$249,900	2.0	2.0	879	$284	1978
463 Ridgeway Ct	Condo/Co-op	Spring Valley	91977	$289,900	2.0	1.5	1,024	$283	1973
1034 Leland St #6	Condo/Co-op	Spring Valley	91977	$299,900	2.0	1.5	1,088	$276	1981

Source: Redfin.com

TABLE B-6

SURVEY OF FOR-SALE ATTACHED RESIDENTIAL SALES (1)
CASA DE ORO
COUNTY OF SAN DIEGO

Address	Property Type	City/Community	Zip Code	Sales Price	Bed	Bath	Square Feet (SF)	$/SF	Year Built
6852 Hyde Park Unit A	Condo/Co-op	San Diego	92119	$343,000	2.0	2.0	1,252	$274	1971
6763 Amherst St Unit E	Condo/Co-op	San Diego	92115	$299,000	2.0	1.5	1,097	$273	1981
945 S Mollison	Condo/Co-op	El Cajon	92020	$317,000	2.0	2.0	1,168	$271	1985
1559 Republic St	Multi-Family (2-4 Unit)	San Diego	92114	$649,999	4.0	3.0	2,408	$270	2016
6864 Hyde Park Drive H	Condo/Co-op	San Diego	92119	$332,500	2.0	2.0	1,252	$266	1971
1604 Presioca atreet #18	Condo/Co-op	Spring Valley	91977	$265,000	2.0	1.5	1,036	$256	1982
8535 Paradise Valley Rd #2	Condo/Co-op	Spring Valley	91977	$449,900	3.0	2.5	1,810	$249	1989
6851 Alvarado Rd #5	Condo/Co-op	San Diego	92120	$280,000	2.0	2.0	1,139	$246	1970
8535 Paradise Valley Rd #3	Condo/Co-op	Spring Valley	91977	$335,000	3.0	2.5	1,440	$233	1989
3180 Florine Dr #4	Condo/Co-op	Lemon Grove	91945	$369,000	3.0	2.5	1,588	$232	1991
9915-19 San Juan	Multi-Family (2-4 Unit)	Spring Valley	91977	$649,000	3.0	3.5	3,100	$209	1935
		Minimum		$188,900	0.0	1.0	304	$209	1932
		Maximum		$1,179,000	8.0	4.0	3,498	$621	2019
		Median		$324,900	2.0	2.0	1,024	$317	1980
		Average		$384,092	2.5	1.9	1,211	$326	1980

(1) Reflects attached residential sales within 5.0 miles of the Casa de Oro Center.

Source: Redfin.com

APPENDIX C
ILLUSTRATIVE EXAMPLES

CASA DE ORO
COUNTY OF SAN DIEGO

TABLE C-1: TOWNHOMES W/ PRIVATE GARAGES

Property Summary Report

XPO Townhomes – 545 Hawthorn St

San Diego, CA 92101 – Bankers Hill MF Submarket

BUILDING	
Type:	Townhomes
Year Built:	2010
Units:	21
Bedrooms:	2
Unit Size:	1,215 – 1,740 SF
Floors:	3
Product Type:	For-Sale

TABLE C-2: LIVE/WORK LOFTS W/ ATTACHED GARAGES

Property Summary Report

Kensington Park Plaza Lofts – 4134 Adams Ave

San Diego, CA 92116 – Bankers Hill MF Submarket

BUILDING	
Type:	Live/Work Lofts
Year Built:	1999
Units:	11
Bedrooms:	1-2
Unit Size:	800 – 1,550 SF
Floors:	3
Product Type:	For-Sale

Property Summary Report

Citronica I - 7755-7775 North Ave

Lemon Grove, CA 91945 - Lemon Grove MF Submarket

BUILDING

Type:	**Mid-Rise Apartme...**
Year Built:	**2013**
Units:	**58**
GBA:	**65,250 SF**
Floors:	**5**
Construction:	**Wood Frame**
Rent Type:	**Affordable**
Market Segment:	**All**

LAND

Land Area:	**0.76 AC**
Parcel	**480-043-36**

EXPENSES PER UNIT

Taxes:	**$110.12 (2019)**

UNIT AMENITIES

Air Conditioning

BEDROOM SUMMARY

		Unit Mix		Vacancy		Avg Asking Rent		Avg Effective Rent		
Totals	**Avg SF**	**Units**	**Mix %**	**Units**	**Percent**	**Per Unit**	**Per SF**	**Per Unit**	**Per SF**	**Concessions**
All 2 Beds	850	29	50.0%	1	3.5%	-	-	-	-	-
All 3 Beds	975	29	50.0%	1	3.5%	-	-	-	-	-
Totals	**913**	**58**	**100%**	**1**	**1.7%**	**-**	**-**	**-**	**-**	**-**

UNIT BREAKDOWN

			Unit Mix		Vacancy		Avg Asking Rent		Avg Effective Rent		
Bed	**Bath**	**Avg SF**	**Units**	**Mix %**	**Units**	**Vac %**	**Per Unit**	**Per SF**	**Per Unit**	**Per SF**	**Concessions**
2	1	850	29	50.0%	1	3.5%	-	-	-	-	-
3	1	975	29	50.0%	1	3.5%	-	-	-	-	-

Updated January 25, 2020

COMMERCIAL LEASING

Available Spaces: 2,000 SF Available in 1 Space

AVAILABLE SPACES

Floor	Suite	Use	Type	SF Avail	Flr Contig	Bldg Contig	Rent	Occupancy	Term
P 1st	7755	Retail	Direct	2,000	2,000	2,000	$12.00/MG	Vacant	Negotiable

Property Summary Report

West Park Apartments - 7777 Westside Dr

San Diego, CA 92108 - Mission Valley MF Submarket

★★★★★

BUILDING

Type:	**Mid-Rise Apartme...**
Year Built:	**2015**
Units:	**612**
GBA:	**510,602 SF**
Floors:	**5**
Metering:	**Individual**
Construction:	**Wood Frame**
Rent Type:	**Market**
Market Segment:	**All**

LAND

Land Area:	**9.71 AC**
Parcel	**677-400-17**

EXPENSES PER UNIT

Taxes:	**$1,614.65 (2019)**

SITE AMENITIES

Business Center, Cabana, Clubhouse, Elevator, Fitness Center, Gameroom, Grill, Lounge, Media Center/Movie Theatre, Recycling, Roof Terrace, Walking/Biking Trails, Wi-Fi

UNIT AMENITIES

Air Conditioning, Heating, Kitchen, Range, Wheelchair Accessible (Rooms)

BEDROOM SUMMARY

		Unit Mix		Vacancy		Avg Asking Rent		Avg Effective Rent		
Totals	**Avg SF**	**Units**	**Mix %**	**Units**	**Percent**	**Per Unit**	**Per SF**	**Per Unit**	**Per SF**	**Concessions**
All Studios	604	45	7.4%	2	4.4%	$1,967	$3.26	$1,967	$3.26	0.0%
All 1 Beds	723	265	43.3%	14	5.3%	$2,232	$3.09	$2,232	$3.09	0.0%
All 2 Beds	1,095	283	46.2%	15	5.3%	$2,759	$2.52	$2,759	$2.52	0.0%
All 3 Beds	1,355	19	3.1%	1	5.3%	$3,571	$2.64	$3,571	$2.64	0.0%
Totals	**906**	**612**	**100%**	**32**	**5.2%**	**$2,498**	**$2.76**	**$2,498**	**$2.76**	**0.0%**

UNIT BREAKDOWN

			Unit Mix		Vacancy		Avg Asking Rent		Avg Effective Rent		
Bed	**Bath**	**Avg SF**	**Units**	**Mix %**	**Units**	**Vac %**	**Per Unit**	**Per SF**	**Per Unit**	**Per SF**	**Concessions**
0	1	583	33	5.4%	2	6.1%	$1,937	$3.32	$1,937	$3.32	0.0%
0	1	662	12	2.0%	1	8.3%	$2,048	$3.09	$2,048	$3.09	0.0%
1	1	645	70	11.4%	4	5.7%	$2,292	$3.55	$2,292	$3.55	0.0%
1	1	722	135	22.1%	7	5.2%	$2,213	$3.07	$2,213	$3.07	0.0%

Updated February 24, 2020

Property Summary Report

The Atlas - 3650 5th Ave

San Diego, CA 92103 - Hillcrest MF Submarket

★★★★☆

BUILDING

Type:	**Mid-Rise Apartme…**
Year Built:	**2009**
Units:	**140**
GBA:	**319,224 SF**
Floors:	**6**
Metering:	**Individual**
Construction:	**Wood Frame**
Rent Type:	**Market**
Market Segment:	**All**

LAND

Land Area:	**0.91 AC**
Zoning:	**CC-1-3**

EXPENSES PER UNIT

Taxes:	**$238.62 (2019)**

PARCEL

452-281-29-01, 452-281-29-02, 452-281-29-03, 452-281-29-04

SITE AMENITIES

Elevator

UNIT AMENITIES

Air Conditioning, Wheelchair Accessible (Rooms)

COMMERCIAL LEASING

Available Spaces: No Spaces Currently Available

SALE

Last Sale: Portfolio of 4 Multi-Family Condos in San Diego, CA Sold on Feb 10, 2012 for $2,400,000 ($448.77/SF)

TRANSPORTATION

Parking:	100 free Covered Spaces are available; 23 free Surface Spaces are available; 0.9 per Unit
Commuter Rail:	6 minute drive to San Diego (Santa Fe Depot) Commuter Rail (Coaster)
Walk Score ®:	Walker's Paradise (96)
Transit Score ®:	Good Transit (54)

COMMERCIAL TENANTS

Pure Barre	1,353 SF	Beauty By Dolly	1,250 SF
Pappalecco	1,138 SF		

Existing Conditions Analysis

Casa de Oro ▪ Campo Road Revitalization Plan

Prepared by:
Michael Baker INTERNATIONAL 60 YEARS Making a Difference
9755 Clairemont Mesa Blvd, San Diego, CA 92124
858.614.5000 ■ MBAKERINTL.com
Contact: Daniel K. Wery, AICP, LEED AP
JN 175688

Prepared for:
County of San Diego
Advanced Planning

FEBRUARY 2020

TABLE OF CONTENTS

1. POLICY & REGULATIONS

GENERAL PLAN - VISION 2020

The study area falls within a Village Area of the General Plan. Villages are intended to accommodate the "highest intensities and the greatest mix of uses" (General Plan, p. 3-6). This categorization does not specifically permit or prohibit uses, rather provide a framework for regional land use planning.

The lands directly on Campo Road are designated as General Commercial (C-1) and have a floor area ratio (FAR) designation of 0.7. However, the General Plan states that "Community Plans may Specify specific areas where [this] FARs may be exceeded" (Land Use Element, p. 3-11). The areas adjacent to the Campo Road Corridor are designated for Village Residential, 24 dwelling units/acre (du/ac) and Village Residential, 4.3 du/ac.

VALLE DE ORO COMMUNITY PLAN

The Valle De Oro Community Plan (VDOCP) provides a vision that "The unique balance of urban, semi-rural, agricultural, and open space land uses shall be retained. The green-belt separation from adjacent cities and planning areas shall be preserved. New development will conserve natural resources and topography and will provide a pleasant, safe environment for present and future residents of Valle de Oro." (VDOCP, 2011).

The VDOCP identifies the study area as an important commercial service area for the region, but acknowledges that it "could use beautification" (VDOCP, p. 12).

SANDAG SMART GROWTH PLAN

SANDAG's Regional 2030 Plan relies on a key principle of focusing growth into areas with high connectivity, intensity, and services. Casa de Oro is identified as a Smart Growth Community (CN-11) because of its existing density and proximity to regional transit. However, the area needs land use changes and transit improvements to realize its potential as a community center.

FIGURE 1: SANDAG SMART GROWTH CONCEPT MAP

FIGURE 2: CASA DE ORO CN-11

CN-11	Casa De Oro	Potential (Requires land use and transit changes)	Community Center	Casa De oro is a well-established community with redevelopment potential. It contains a potential community center along Campo Road, between Rogers Road and the intersection of Campo Road and Granada Avenue. An existing grid pattern supports walkability.	(Existing Low-Frequency Local Bus) No Qualifying Existing or Planned Transit

ZONING

The Campo Road corridor is zoned for General Commercial (C36) for approximately one block north and south in each direction. The corridor is mostly surrounded by residential and institutional uses with low and medium residential, schools, and churches abutting the commercial area (zoned RU and RS). There is also a small pocket of industrially zoned land (M52) between Kenora Drive and the State Route (SR)-94 highway.

Generally, the use and building designators for the area are permissive, with combinations of commercial and multi-family residential allowed by right. Buildings in the C36 zone are limited to 35 feet and two stories, as are most of the residential uses in the RU and RS zones. One residential parcel allows for three-story development, and the small industrial area allows for 40-foot buildings and three stories.

Most of the study area is not required to provide any open space (designator A). Some of the urban residential properties are required to provide common open space of 150 square feet per dwelling (designator B).

Along the Campo Road corridor, 7.3 dwellings per net acre are allowed in the commercial areas. These residential uses must be secondary to a commercial use on the property.

Campo Road is zoned for general commercial uses, with a setback designator of O, and a height limit of 35 feet and two stories. The properties behind the corridor (south of Kenora Drive and Dolores Street, and north of San Juan Street) are zoned for urban residential uses. However, the Zoning Code contains special setback requirements for the entire corridor: 75 feet from the centerline on Campo Road between Rogers and the SR-94. There appear to be several buildings that are nonconforming with this standard, mostly located on the eastern half between Bonita Dr. and Granada Ave.

The commercial area has fairly restrictive animal regulations (designator Q), which allows for up to 25 small birds and two large animals, as well as small numbers of specialty animals. The residential zones have an animal designator of A, which is also highly restrictive and does not allow many animals by right, though some otherwise prohibited animals are allowed for large parcels and with use permits.

The area is subject to several setback requirements (designator O). On Campo Road, buildings must have a setback of 50 feet measured from the centerline of the abutting street. This translates into an approximate required setback of 10 to 12 feet from the back of the sidewalk. There is a 0-foot side setback, unless the property abuts a residential zone, in which case the setback is 5 feet. Exterior side setbacks must be 35 feet, as measured from the centerline of the street. Rear setbacks are 25 feet measured from the lot line, or 15 feet if the lot is used exclusively for buildings with commercial principal uses or buildings with commercial principal uses with dwellings on the second story.

Finally, nearly all parcels in the corridor are subject to special requirements B and D3, which require Site Plan Reviews and Design Reviews, respectively. Additionally, some properties are required to complete an Airport Land Use Compatibility review (requirement C).

ALLOWED USES

The C36 Zone allows many civic, commercial, and light industrial uses by right. These include uses such as retail, automotive repairs and sales, and custom manufacturing. Other uses such as residential, heavy equipment repair, and recycling facilities, are allowed but subject to additional performance standards. Group homes are allowed with Major Use Permits.

TABLE 1: ZONING SUMMARY

	Campo Road Commercial Corridor	Adjacent Areas
Use	C36 – General Commercial	M52 – Limited Industrial RU – Urban Residential RS – Single Family Residential
Building Type	T – Residential: Triplex and more intensive; All nonresidential (along Campo Road)	C – Single detached, with limited nonresidential mixed use and both detached and attached nonresidential K – All residential types L – All building types S – triplex to multi-family residential W – only nonresidential
Height	G – 35', 2 stories	G – 35', 2 stories H – 35', 3 stories J – 40', 3 stories
Setback	O – Front: 50' from centerline; 75' front yard setback between Rogers and SR-94 Interior Side: 0', unless adjacent to residential, then 5' Exterior Side: 35' from centerline Rear: 25'; 15' if used for commercial or if residences on second floor	G H K
Open Space	A – No open space	A – No open space B – 150 s.f. common open space per dwelling
Animal Regulations	Q – Generally restrictive	A – Q –
Density	7.3 du/ac	24 du/acre for RU zones (based on VR-24) 4.3 du/acre for RS zones (based on VR-4.3)
Special Requirements	B – Community Design Review, Site Plan C— Airport Land Use Compatibility Analysis D3 – Design Review, Site Plan	B C D D2 D3

2. EXISTING USE & FORM

The following section summarizes the existing land use, ownership patterns, and community form. The appendix contains a series of maps that illustrate these features of the Casa de Oro use and form.

EXISTING LAND USE

The study area is roughly 70 acres in area and includes approximately 120 parcels and 750,000 square feet of total floor area along approximately a 0.6-mile long portion of Campo Road between Rogers Road and Granada. About half the acreage and parcels front directly onto Campo Road. Those 70 parcels contain over 70% of the total floor area in the study area.

The corridor contains a wide range of uses including all of the retail and personal service uses a community needs (see the Land Use figure in the Appendix). The vast majority (over 70%) of the total floor area is general commercial shopping centers retail; office/banks (12%); auto parts, repair and service, gas stations (8%); multi-family (7%), restaurants (3%), some personal service and medical office uses, and public and institutional uses (2%).

The existing uses, roadway and design of individual properties are almost exclusively auto-oriented. There are at least 5 auto parts stores, three gas stations, half a dozen auto sales and repair shops, and two car washes. Many of the banks and restaurants have one or more drive-through aisles and lanes. Campo Road itself has five wide lanes, over 70 curb cuts and driveways that approach the amount of curbed area. The sidewalks along Campo Road are narrow, interrupted and broken in some areas, are constantly interrupted by driveways, and are often sandwiched between Campo Road and off-street parking lots. With a few exceptions, the sidewalks have little shade, greenery, and are distant and separated from the nearest buildings. The presence and absence of sidewalks and the location of driveways and curb cuts are shown on the Streets, Blocks, Buildings, Sidewalks and Driveways figure in the appendix.

Except for the three parcels near Rogers Road, there are no residential uses in buildings that front on Campo Road. The immediate and larger area includes several schools, two large churches, a library, post office, and County Sheriff's sub-station.

PARCEL SIZE AND OWNERSHIP

Parcel size and ownership patterns affect the nature of the area, its management, and can impact how the area has and can develop. Small parcels represent smaller investments, buildings and developments, and contribute to a varied and organic development pattern. Larger parcels can have significant impact on the character due to their size, visibility, and common management. The size of a parcel and the amount of development it can accommodate also affect the size and types of uses likely to occur. Franchise and larger corporate retailers have very specific criteria for the size, location, orientation and even adjacent businesses. Small, independent businesses are typically attracted to smaller, more affordable, buildings and properties.

Casa de Oro has two distinct parcel size and ownership patterns (**S**ee the appendix for Ownership and Lot Size figures). The area east of Bonita is typified by small lots and buildings while the area west of Bonita are large parcels and large contiguous shopping center buildings set far back from Campo Road.

Of the 120 study area parcels, there are roughly 95 different official ownerships. Several of the ownerships could be the same persons or corporations, but with different legal entities for separate properties. Nonetheless, the area reflects a large variety in ownership. This is particularly true in the eastern half of the study area, east of Bonita where the blocks and parcels are relatively small. There are several groups of adjacent small parcels, often in twos and threes, under the same ownership. The western half comprised of several shopping centers, has relatively few owners. Several of the centers are owned by the same family.

COMMUNITY FORM – STREETS, BLOCKS, BUILDINGS

The physical elements and form a community determine how we experience and interact our community. Our streets, blocks, buildings, sidewalks, driveways are key community building blocks. Each element combines with the next to provide the physical structure of the study area. Streets represent a large percentage of every community (20%+); the largest public land use (greater than parks, schools, and civic buildings). They are the primary means that we experience our community – on foot, on bicycle and by car, this is how we see most of our communities. They literally shape our communities. The size, shape and design of our streets affect how we use them, and how we travel along them. (The road design characteristics are discussed in the separate Existing Conditions Traffic Analysis and Parking Assessment report.)

Streets define our blocks. Casa de Oro has two types of blocks:

1. Smaller, shallower urban blocks. These have typical dimensions of 300' x 400' (1/4 mile in circumference) with center 20-foot alleys.
2. Superblocks. The western half of the Casa de Oro Campo Road corridor is defined by 1,320' x 450' block dimensions.

Smaller, classic urban dimensioned blocks are easy for pedestrians to navigate. All four sides of the block are developed with buildings that front on and have their primary entrances and activity facing the street. This creates streets with active uses on both sides along the entire road frontage. The blocks east of Bonita also have the benefit of on-street parking. In addition to providing a convenient parking resource, parked cars provide a substantial physical barrier between pedestrians, buildings and moving vehicles. This provides a level of physical, visual and psychological protection.

The length of only one side of one Super Block is about equal to the entire perimeter of one Urban Block.

Buildings create the walls of our community. Like streets, they can unite, and they can divide. As with blocks, buildings in the smaller Urban Blocks generally have smaller footprints and total floor areas. Most of the existing buildings in the study area are 1-story. All of the existing two-story buildings are located on smaller blocks and lots east of Bonita, and west of Kenwood. All of the buildings in the superblocks and shopping centers are 1-story. This suggests that there is a lot of potential for future growth and development with multi-story buildings. The building size, location and stories are shown on the Building Height figures in the appendix.

Most healthy and growing Main Streets and commercial and mixed-use corridors have a variety of building heights. Often, the largest or most prominent buildings are located on street corners and serve as gateways and landmarks. The variety and juxtaposition can add to visual interest and the creation of

interesting and inviting spaces between buildings. Often, it is the relatively small voids, setbacks, stepbacks, paseos and passages that create unique and attractive intimate spaces for pedestrians.

Another important feature is the that the buildings in the Super Blocks create equally long walls and prevent movement and connectivity through the blocks. All of the building front on one side only, and create unobserved, inactive areas behind them. The resulting alleys of Kenora and San Juan are very unattractive, inhospitable areas that attract trash, graffiti, and crime.

Blocks and Buildings in Super Blocks limit North-South circulation. The distance to travel from one side of a Super Block to the other is three times greater than for a standard urban block (see the appendix for Block Type and Building Pattern figures).

Building size is also expressed in terms of the total floor area. Again, the same pattern applies. The largest buildings are on the superblocks and shopping center developments west of Bonita. Those buildings range up to 40,000 square feet. East of Bonita, the largest building is less than 18,500 square feet. A measure of density and land use efficiency is the ratio of the total building floor area divided by the total lot area of the parcel on which the building is located, or Floor Area Ratio (FAR). The General Plan establishes a maximum FAR of 0.70 for the C-1 General Commercial designation which governs most of the study area. This is a low ratio in comparison to most healthy commercial corridors and zoning districts, particularly those that are more compact and walkable as opposed to strip commercial and auto-oriented designs.

See the appendix for the Floor Area Ratio exhibit. The map illustrates how, despite having the largest building by floor area, the superblock shopping center developments also some of the lowest FARs. The map also shows that there are 13 existing buildings that exceed the 0.70 maximum FAR. All of these buildings are located east of Bonita, or west of Kenwood. Most are 2-story buildings

3. WATER

EXISTING

Helix Water District (HWD) is the water purveyor for the Cities of El Cajon, La Mesa, and Lemon Grove, as well as parts of the unincorporated communities of Lakeside, Valle de Oro/Mount Helix, and Spring Valley. HWD provides water services in the Campo Road commercial corridor. Padre Dam Water District provides water to the north of HWD's service area; the City of San Diego provides water within the City of San Diego to the west; and Otay Water District provides service to the unincorporated communities south and east of the HWD service area.

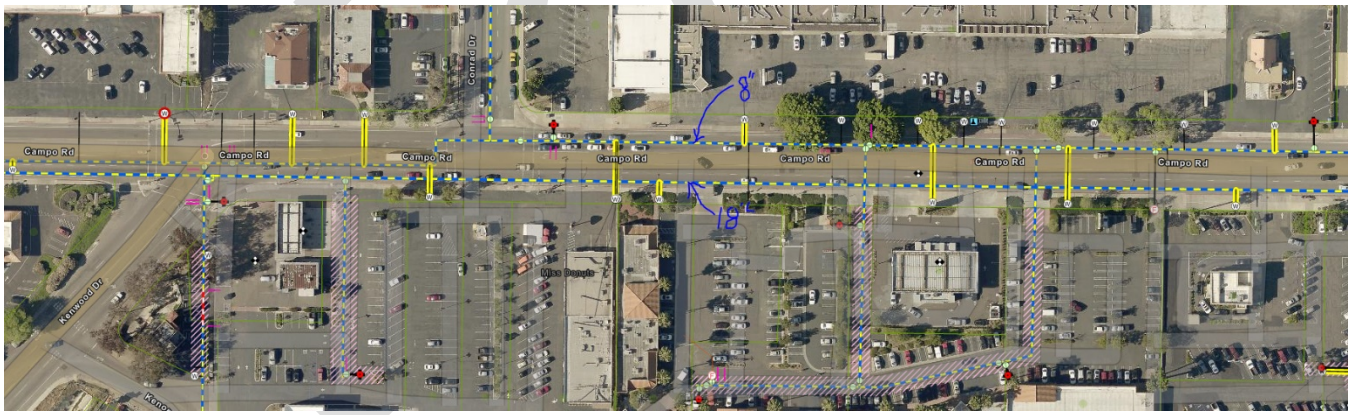
The project area is currently served by two water mains on Campo Road. One is an 8-inch main located in the north end running within the right-of-way both under private parking lots and under the road in Bonita Street. The other is an 18-inch main that runs straight throughout the southern half of the street. Both 8-inch and 18-inch water mains are asbestos cement pipes and were constructed in the early 1950s and the early 1970s, respectively. Most businesses on both sides of the street are served by the 8-inch main. HWD also has several easements, mostly over drive aisles and parking lots, providing service to

some of the larger ("big box") retailers on the south side of Campo Road between Bonita Street and Kenwood Drive.

HWD also owns and operates a pump station on the northwest corner of Dolores Street and S. Cordoba Avenue. This pump station provides pressure for the 18-inch pipe under Campo Road. The 18-inch pipeline was initially expected to be a transmission main, but now provides limited water service to homes and businesses. It is still listed as a transmission main in the district's Urban Water Management Plan (Figure 3-3, p. 15). This 18-inch main would likely have enough capacity to serve an expansion of commercial and residential uses in the corridor.

FIGURE 3: HELIX WATER DISTRICT INFRASTRUCTURE FROM GRANADA TO BONITA

FIGURE 4: HELIX WATER DISTRICT INFRASTRUCTURE FROM BONITA TO KENWOOD



CAPACITY

Water service capacity does not appear to be a constraint on the future growth or development of the corridor. There is adequate supply and service pressures. Determining water service capacity is based not only on the daily demand of the existing and planned development, but also peak demand calculations, or peaking factor, which is typically 4 to 5 times the average daily demand measured in gallons per minute (gpm). This accounts for emergency service including fire flow, daily demand and potential line failures and disruptions.

Fire pressure and water supply is needed to determine whether the system has additional capacity. Asked whether 300-400 dwelling units could be accommodated in the corridor, HWD confirmed that the gravity system (HGL=656'), which is fed from its 30 mg reservoir, should be able to accommodate expansion of the 300-400 units. At 100 gpd per person and an average of two persons per unit would have a projected demand of 80,000 gpd (400 du x 2 persons per du x 100 gpd/person = 80,000 gpd). HWD noted that static pressure is the area are good – between 75 psi to 98 psi – and that two other pressure systems in the vicinity can be utilized and extended to feed the corridor and obtain higher static pressures if needed for additional expansion:

- Dictionary Hill Distribution System (HGL= 851') south of Campo Road
- Helix 1 Distribution System (HGL=880'), north of Campo Road at N. Cordoba Avenue

It is noted that HWD and all other water suppliers and agencies are required to prepare their 20-year Urban Water Management Plans (UWMP) in 2020. UWMP allow each agency to plan for growth over the next 20 years in five-year intervals. Draft plans must be released this year (2020) and finalized in 2021. Potential zoning and policy changes that would result in new or significant development should be factored into the UWMPs. The County should notify HWD of the Casa de Oro Specific Plan and the potential to allow and encourage additional development density and intensity. While policy and land use alternatives and recommendations have yet to be prepared, it is recommended that HWD evaluate up to 500 to 1,000 additional dwelling units in the study area over the next 20 to 30 years.

PLANNED IMPROVEMENTS

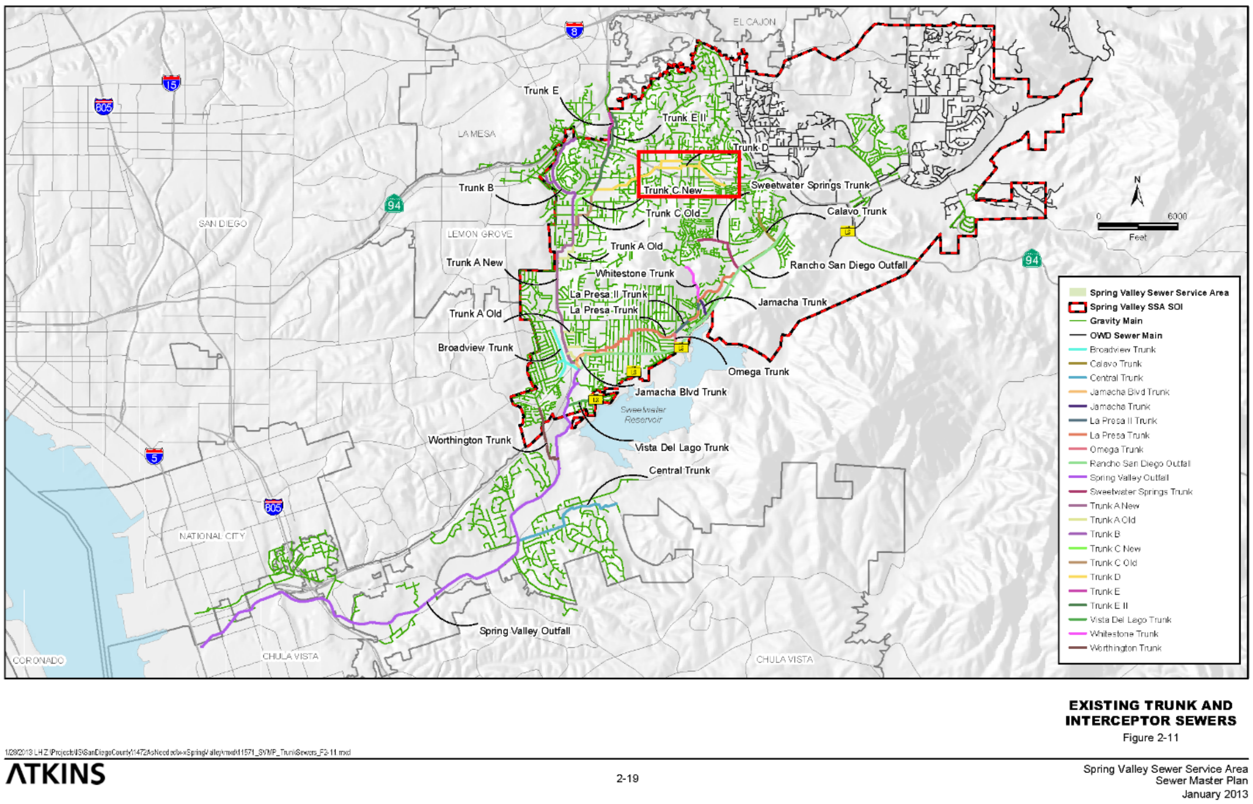
HWD does not have any planned improvements for the area.

4. SEWER

EXISTING

Sewer service for the area is provided by the Spring Valley Sanitation District, a subdistrict of the San Diego County Sanitation District. The existing sewer system along the corridor was constructed from vitrified clay pipe (VCP) in 1965. The sewer is a gravity main which flows east to west. From Granada Avenue to Bonita Street, two 8-inch VCP sewer mains serve the community, each running within the two alleys behind the commercial district on Campo Road. On Bonita Street, the two sewers converge on Campo Road and run west to Kenwood Drive as 10-12-inch VCPs. Another 12-inch VCP runs parallel with Campo Road on Kenora Drive, and then transitions to an 18-inch VCP main and connects to Kenwood Drive near the SR-94 westbound offramp. This section is officially known as Trunk D in the Spring Valley Sanitation District Master Plan (SVSDMP).

FIGURE 5: TRUNK D

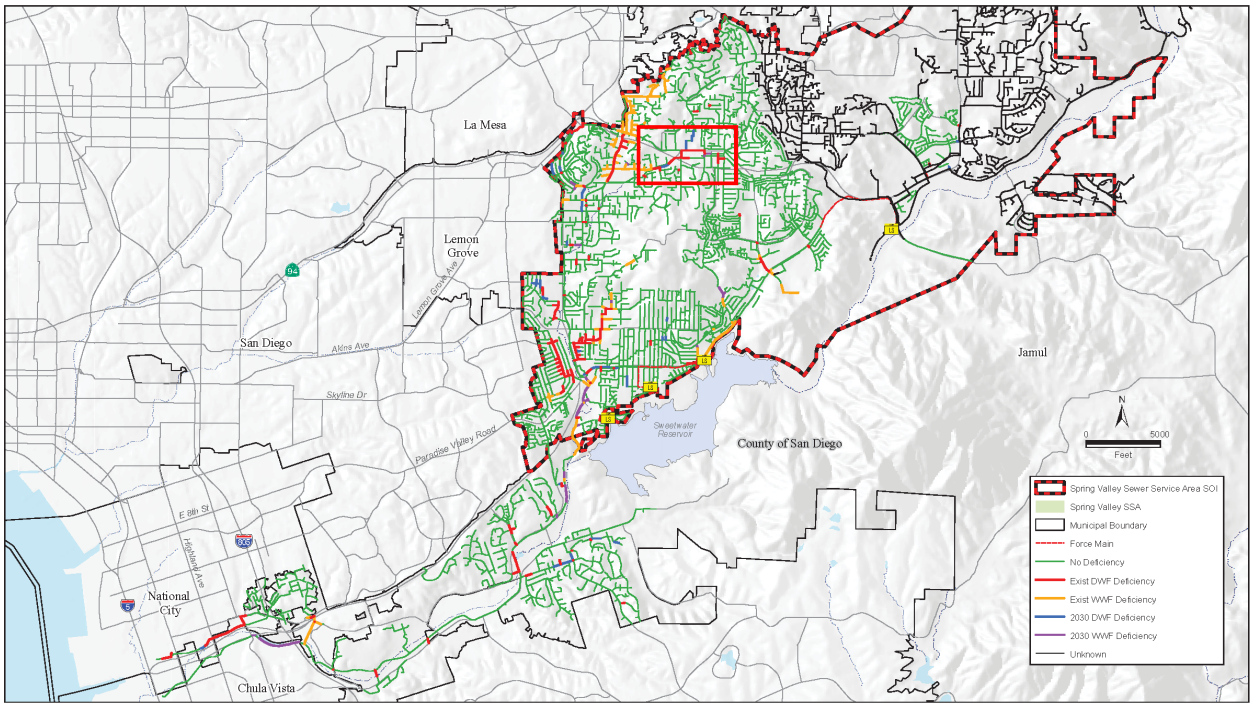


The sewer main along Bonita Street is also listed as a "Special Maintenance Site" (SVSDMP, Figure 5-2).

CAPACITY

The SVSDMP shows that the Campo Road sewer line has an existing dry weather flow deficiency (SVSDMP, Figure 4-32). This may mean that the area does not have room for increased development or intensity under the current system. Downstream areas have existing wet weather flow deficiency. Flow monitoring for the both the Campo commercial area and downstream connections would likely need to be conducted to identify remaining capacity under the existing system.

FIGURE 6: GRAVITY PIPELINE IDENTIFIED DEFICIENCIES



CONSTRAINTS

Table 5-4 of the SVSDMP indicates that several areas along Trunk System D require point repairs or replacements. Based on feedback from County staff, the existing sewer main under Campo Road is likely overcapacity and would need to be upsized.

PLANNED IMPROVEMENTS

The Spring Valley Sanitation District indicates that the sewer main on Campo Road (west of Bonita Street) is proposed as a Phase I Capital Improvement Project (Project SV-9). The plan calls for replacing the 10-12-inch VCP with a 15-inch pipe, at an approximate cost of $3.36 million. This project is entering the engineering phase, with expected construction in 2023–2024. The proposed 15-inch piping would accommodate the existing land uses, but likely would not accommodate significant new development. We recommend that the size of the pipe be examined in anticipation of new land uses and additional demand in the area prior to design and installation.

FIGURE 7: PROPOSED PIPELINE REPLACEMENT

Proposed Capital Improvement Program

CIP Project:	SV-9 – Trunk D Sewer Pipeline Replacement Project
Description:	Replace approximately 2,800 feet of existing 10-inch and 12-inch diameter with approximately 15-inch diameter from SR-94 at Kenwood Drive, extending to Campo Road.
Estimated Construction Cost:	$3,360,000
Estimated Construction Schedule:	Phase II

5. DRAINAGE

EXISTING

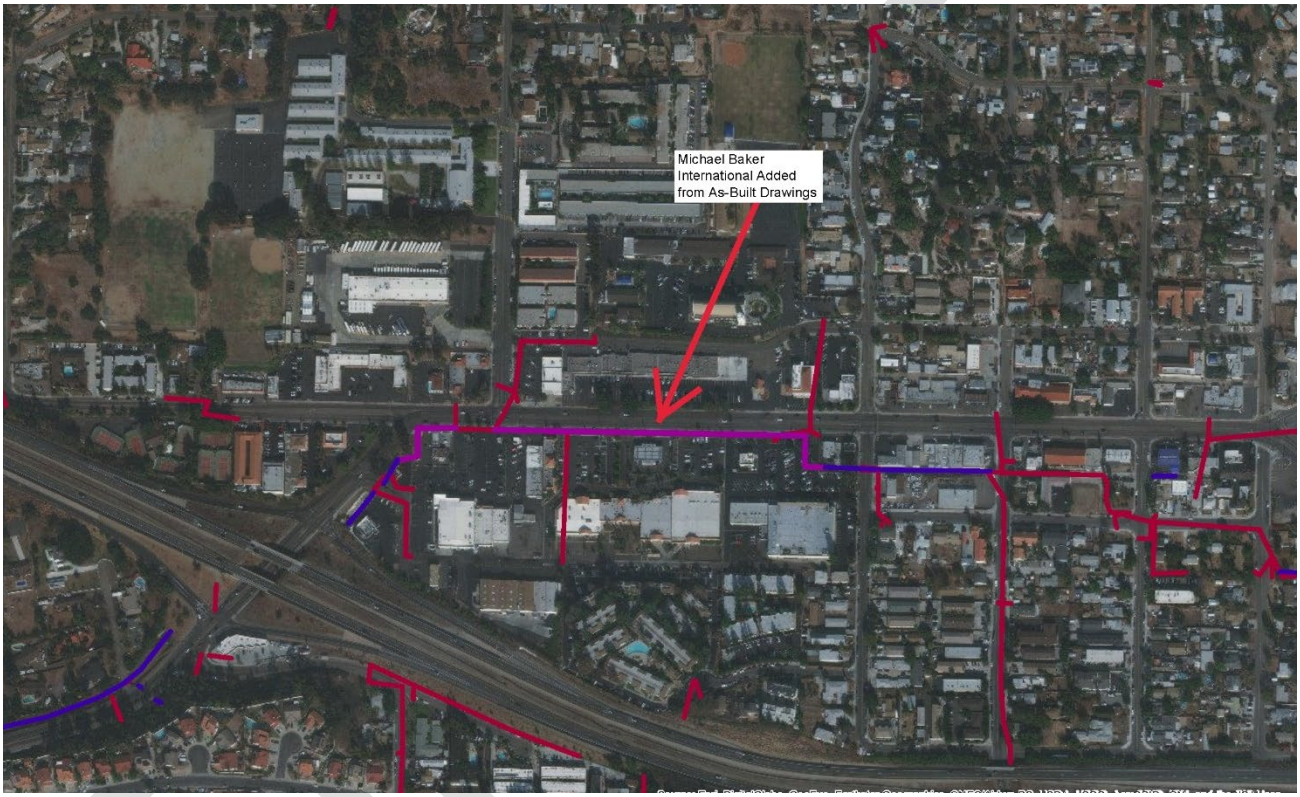
The project area falls completely within the San Diego watershed and is mostly impervious surface with little to no infiltration. The topography of the surrounding area directs storm flows to corridor, but it within an area of low risk of flooding, according to FEMA and SanGIS data. An 85-percentile rain event indicates the area would receive between .65 inches and .7 inches in a storm.

The project area does lie at the bottom of the valley between Dictionary Hill and Mount Helix, and thus has significantly sized pipes to accommodate heavy rainfall and drainage for the surrounding area.

Generally, drainage flows east to west and north to south in the project area. East of Bonita Street, drainage generally flows south to a pipe in an alley north of Bonita Street. This pipe transitions to an

open concrete trapezoidal channel just west of S. Barcelona Street, which continues past Bonita Street for approximately 130 feet before transitioning underground to two corrugated metal pipes in the Albertsons parking lot. These pipes flow north and connect to other drainage facilities under the Campo Road sidewalk, where water then flows west to the drive aisle of Campo Road and the Quik gas station. The water then travels south in an open trapezoidal channel along Kenwood Drive under SR-94, where it passes through a four-barreled box culvert, emerging in an unlined ditch on the north side of Kenwood Drive.

FIGURE 8: EXISTING COUNTY-MAINTAINED DRAINAGE FACILITIES



CAPACITY

Most of the corridor is developed with impervious surface. Redevelopment would be subject to new stormwater requirements and would likely result in improved drainage and more infiltration. The condition of the pipes is unknown, but they were mostly installed from the mid-1960s to early 1990s and are constructed of corrugated metal.

CONSTRAINTS

The existing drainage infrastructure, particularly on the south side of Campo Road, is significant, and could be challenging or costly to relocate. The large, trapezoidal channel between Barcelona and Bonita currently handles the drainage for most of the area, and could be expensive to convert to a box-culvert or large underground pipeline. Further west, the 65”x40” corrugated metal pipe mostly runs within the right of way (under the sidewalk on Campo), which could allow additional development over the parking

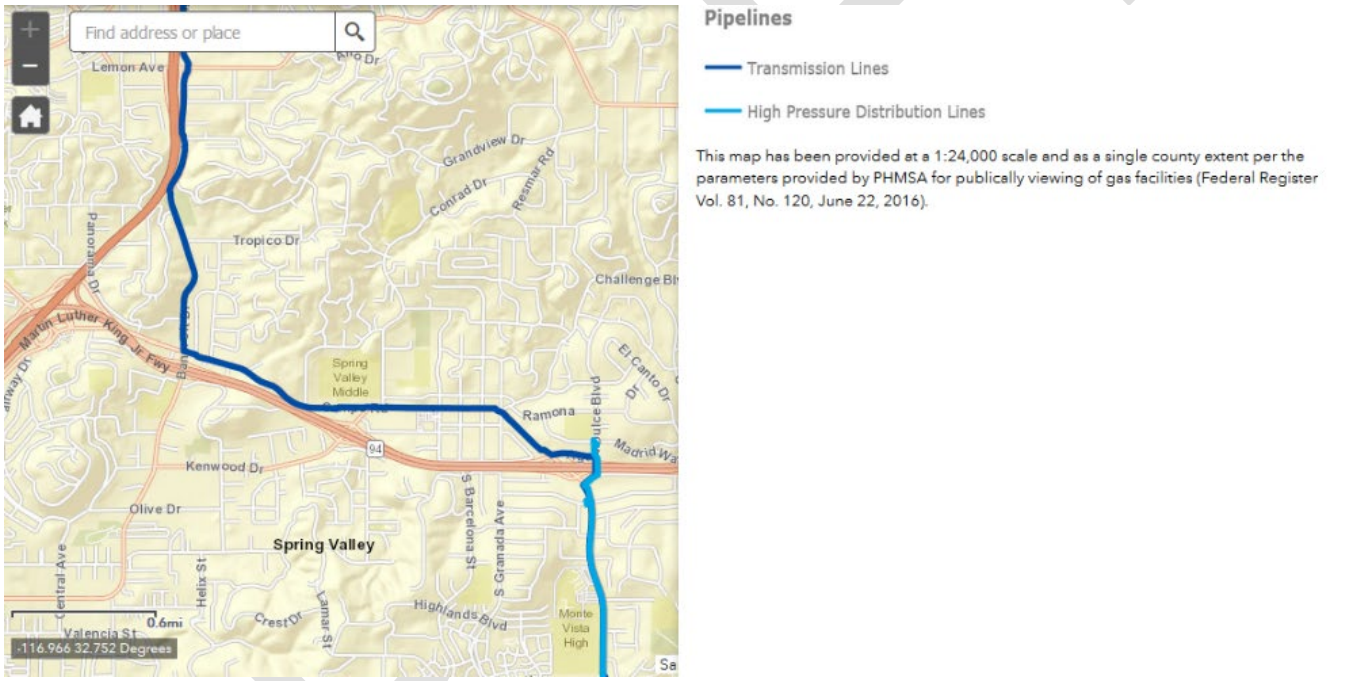
lot of the Casa De Oro Center. Also challenging are existing private 36-inch pipes running under parcels south of Campo Road, between Cordoba and Granada Avenues. Additionally, development on two properties on the corner of Dolores Street and South Cordoba Avenue is heavily constrained by a double-barreled 4-foot by 6-foot box culvert that runs between the two parcels. The County has a drainage easement over the edges of the parcels, potentially limiting development.

6. ELECTRICITY AND GAS (SDGE)

EXISTING

A high-pressure pipeline runs underneath Campo Road through the entire corridor. According to the SDGE website, the gas transmission pipelines are "generally large diameter pipelines that operate at pressures above 200 psi and transport gas from supply points to the gas distribution system." A review of as-builts on the County's Survey Record System (SRS) shows that this gas line is 6 inches in diameter.

FIGURE 9: SDGE PIPELINE MAP



CONSTRAINTS

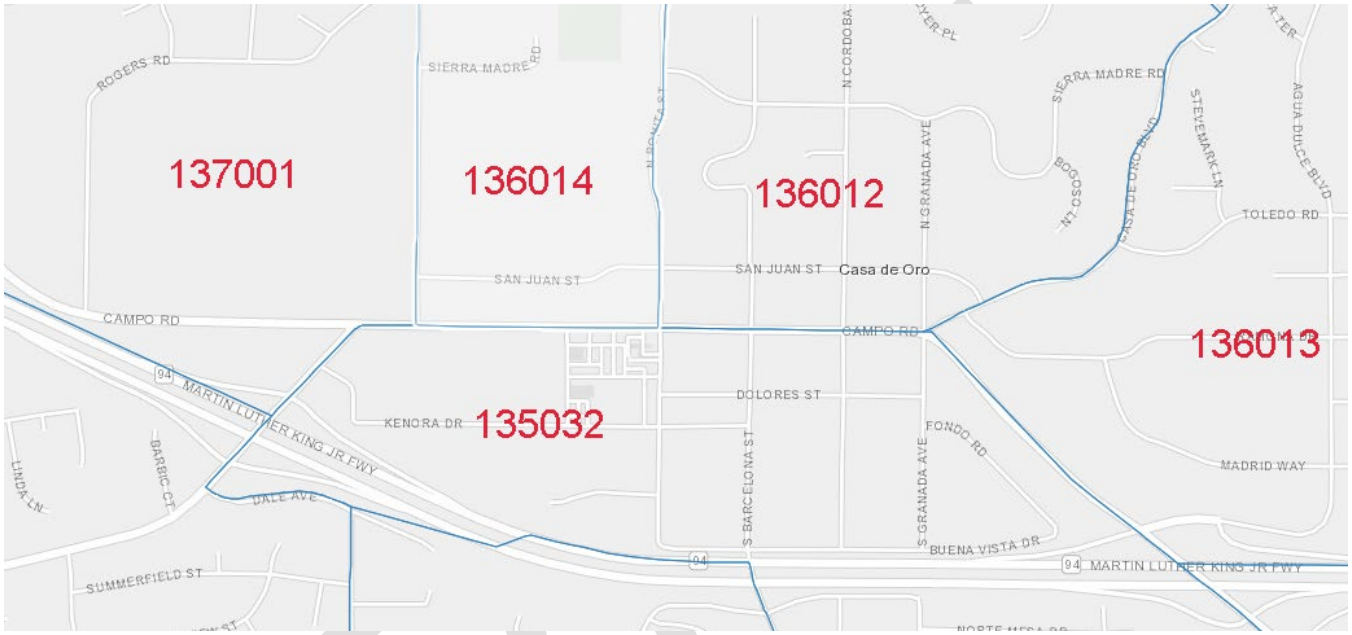
This transmission pipeline represents a significant constraint, as a high-pressure gas transmission pipeline would generally be difficult and resource intensive to relocate. A relocation or alteration may also require the approval of the California Public Utilities Commission, which can be an extensive and time-consuming process.

We recommend that a detailed review or survey be conducted to identify the precise location of the pipeline within Campo Road. Based on current as-built drawings accessed from the SRS system,

7. CAMPO ROAD CORRIDOR DEMOGRAPHIC ANALYSIS

The project area has a highly diverse population. The main commercial area of Campo Rd. is directly adjacent to three block groups: 136014, 136012, and 135032. These block groups tend to be more racially diverse and lower income than the surrounding Casa de Oro Mount Helix average.

FIGURE 10: BLOCK GROUPS IN PROJECT AREA



The median household income ranges from $41,915 to $97,188, depending on the block group. The central areas abutting the main commercial area tend to have lower incomes and younger populations than the surrounding census block groups, which extend north to parts of Mount Helix. The community is majority white, with a significant black and non-white Hispanic population. Roughly 30-45% (depending the block group) are below the ages of 18 or above 65, which is known as dependent population. Between 5 and 16.5 percent of the population has an income under the poverty line.

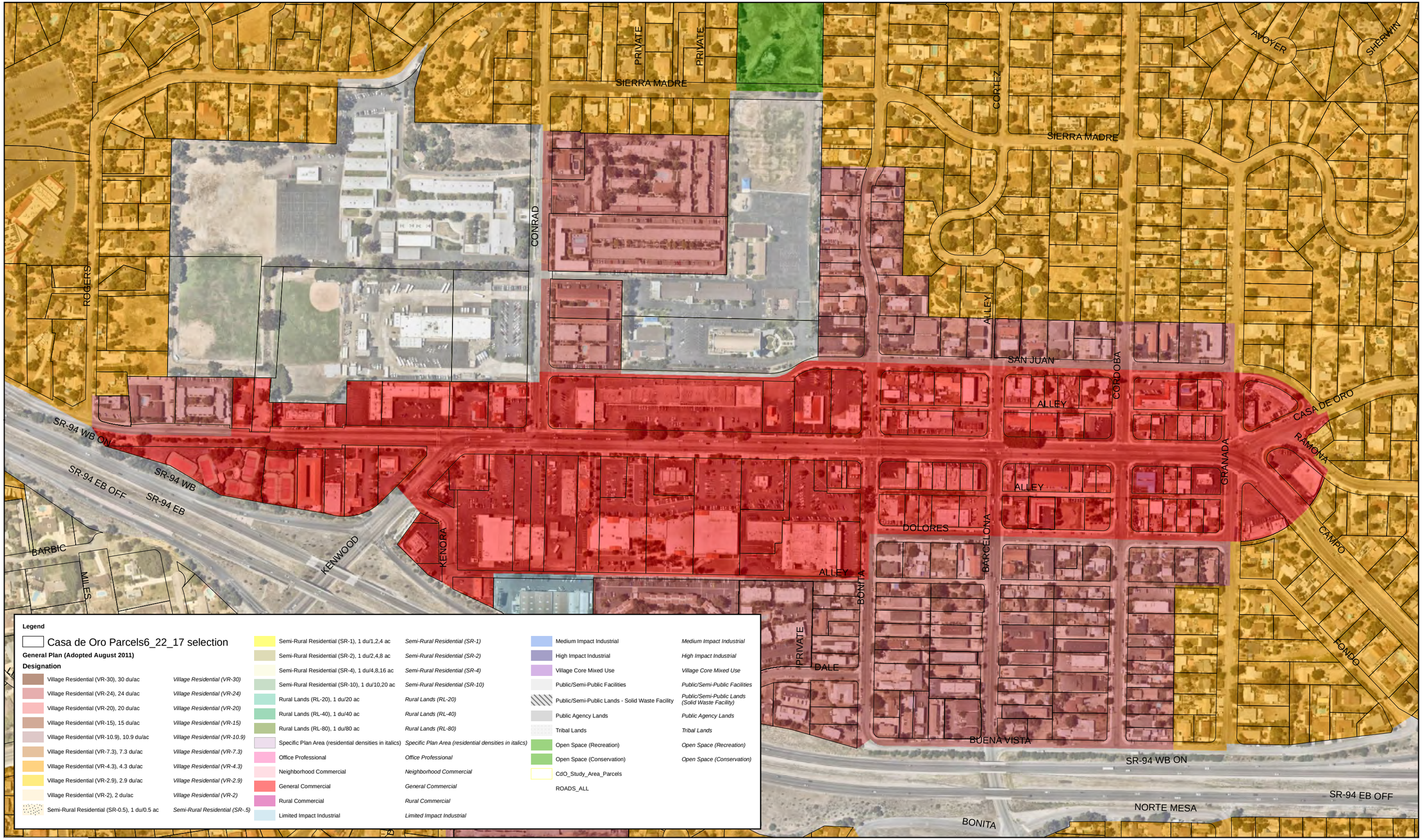
TABLE 2: STUDY AREA DEMOGRAPHICS[1]

	135032	136014	136012	Casa de Oro-Mount Helix Average
Population	2122	1547	1916	9199
Median Age	34	32	44.3	44.7
Income	41,915	$48,263	$80,192	94,954
Poverty	15%	16.5%	13.5%	12.7%
Race	42% White 37.8% Hispanic 13.8% Black 3% Asian 3% Other	42.7% Hispanic 28.3% White 26.3% Black 2.7% Other	60.2% White 33.7% Hispanic 3% Black 2.7% Two or More	63.2% White 23.8% Hispanic 5.2% Black 4.0% Two or More 2.2% Asian

[1] http://www.city-data.com/city/Casa-de-Oro-Mount-Helix-California.html

Maps


ROGERS
ROGERS
PRIVATE
PRIVATE
SIERRA MADRE
AVOYER
SIERRA MADRE
CORTEZ
BOGOSO
CONRAD
ALLEY
SAN JUAN
BONITA
ALLEY
CORDOBA
CASA DE ORO
CAMPO
GRANADA
RAMONA
ALLEY
DOLORES
SR-94 WB ON
KENWOOD
KENORA
SR-94 EB OFF
ALLEY
BARCELONA
PRIVATE
PRIVATE
SR-94 WB OFF
FONDO
DALE
SR-94 EB ON
DALE
BUENA VISTA
SR-94 WB
SR-94 WB ON
SUMMERFIELD
SUMMERFIELD
KENORA
PRIVATE
SR-94 EB
SR-94 EB OFF
QUAILVIEW
DOVEVIEW
PRIVATE
BONITA
CORDOBA
NORTE MESA
GRANADA



Legend

Casa de Oro Parcels6_22_17 selection

General Plan (Adopted August 2011)

Designation

Village Residential (VR-30), 30 du/ac	*Village Residential (VR-30)*
Village Residential (VR-24), 24 du/ac	*Village Residential (VR-24)*
Village Residential (VR-20), 20 du/ac	*Village Residential (VR-20)*
Village Residential (VR-15), 15 du/ac	*Village Residential (VR-15)*
Village Residential (VR-10.9), 10.9 du/ac	*Village Residential (VR-10.9)*
Village Residential (VR-7.3), 7.3 du/ac	*Village Residential (VR-7.3)*
Village Residential (VR-4.3), 4.3 du/ac	*Village Residential (VR-4.3)*
Village Residential (VR-2.9), 2.9 du/ac	*Village Residential (VR-2.9)*
Village Residential (VR-2), 2 du/ac	*Village Residential (VR-2)*
Semi-Rural Residential (SR-0.5), 1 du/0.5 ac	*Semi-Rural Residential (SR-.5)*
Semi-Rural Residential (SR-1), 1 du/1,2,4 ac	*Semi-Rural Residential (SR-1)*
Semi-Rural Residential (SR-2), 1 du/2,4,8 ac	*Semi-Rural Residential (SR-2)*
Semi-Rural Residential (SR-4), 1 du/4,8,16 ac	*Semi-Rural Residential (SR-4)*
Semi-Rural Residential (SR-10), 1 du/10,20 ac	*Semi-Rural Residential (SR-10)*
Rural Lands (RL-20), 1 du/20 ac	*Rural Lands (RL-20)*
Rural Lands (RL-40), 1 du/40 ac	*Rural Lands (RL-40)*
Rural Lands (RL-80), 1 du/80 ac	*Rural Lands (RL-80)*
Specific Plan Area (residential densities in italics)	*Specific Plan Area (residential densities in italics)*
Office Professional	*Office Professional*
Neighborhood Commercial	*Neighborhood Commercial*
General Commercial	*General Commercial*
Rural Commercial	*Rural Commercial*
Limited Impact Industrial	*Limited Impact Industrial*
Medium Impact Industrial	*Medium Impact Industrial*
High Impact Industrial	*High Impact Industrial*
Village Core Mixed Use	*Village Core Mixed Use*
Public/Semi-Public Facilities	*Public/Semi-Public Facilities*
Public/Semi-Public Lands - Solid Waste Facility	*Public/Semi-Public Lands (Solid Waste Facility)*
Public Agency Lands	*Public Agency Lands*
Tribal Lands	*Tribal Lands*
Open Space (Recreation)	*Open Space (Recreation)*
Open Space (Conservation)	*Open Space (Conservation)*
CdO_Study_Area_Parcels	
ROADS_ALL	

Michael Baker INTERNATIONAL

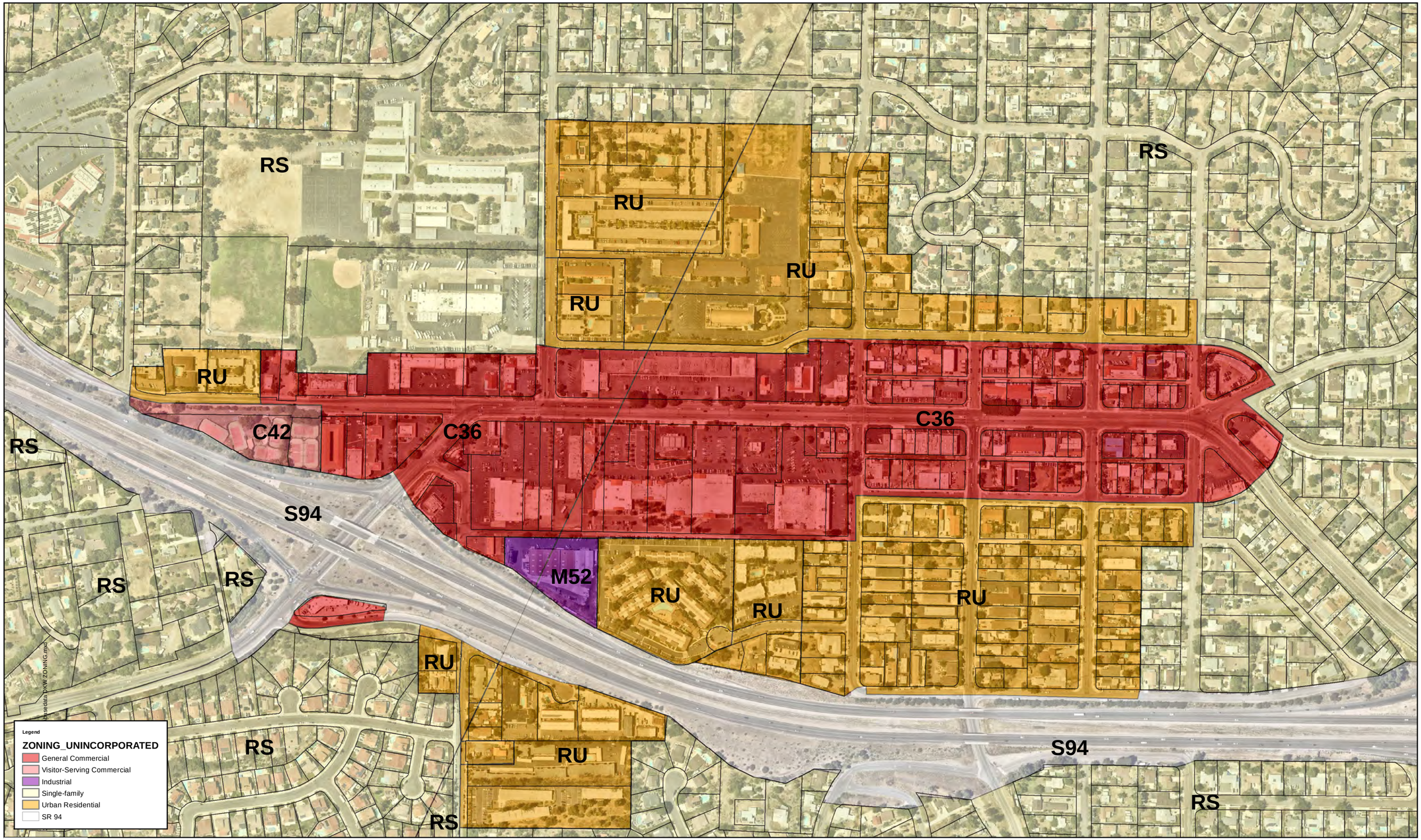
0 50100 200 300 Feet

Source:

Casa de Oro Revitalization Strategy

2011 County General Plan Land Use

Exhibit X



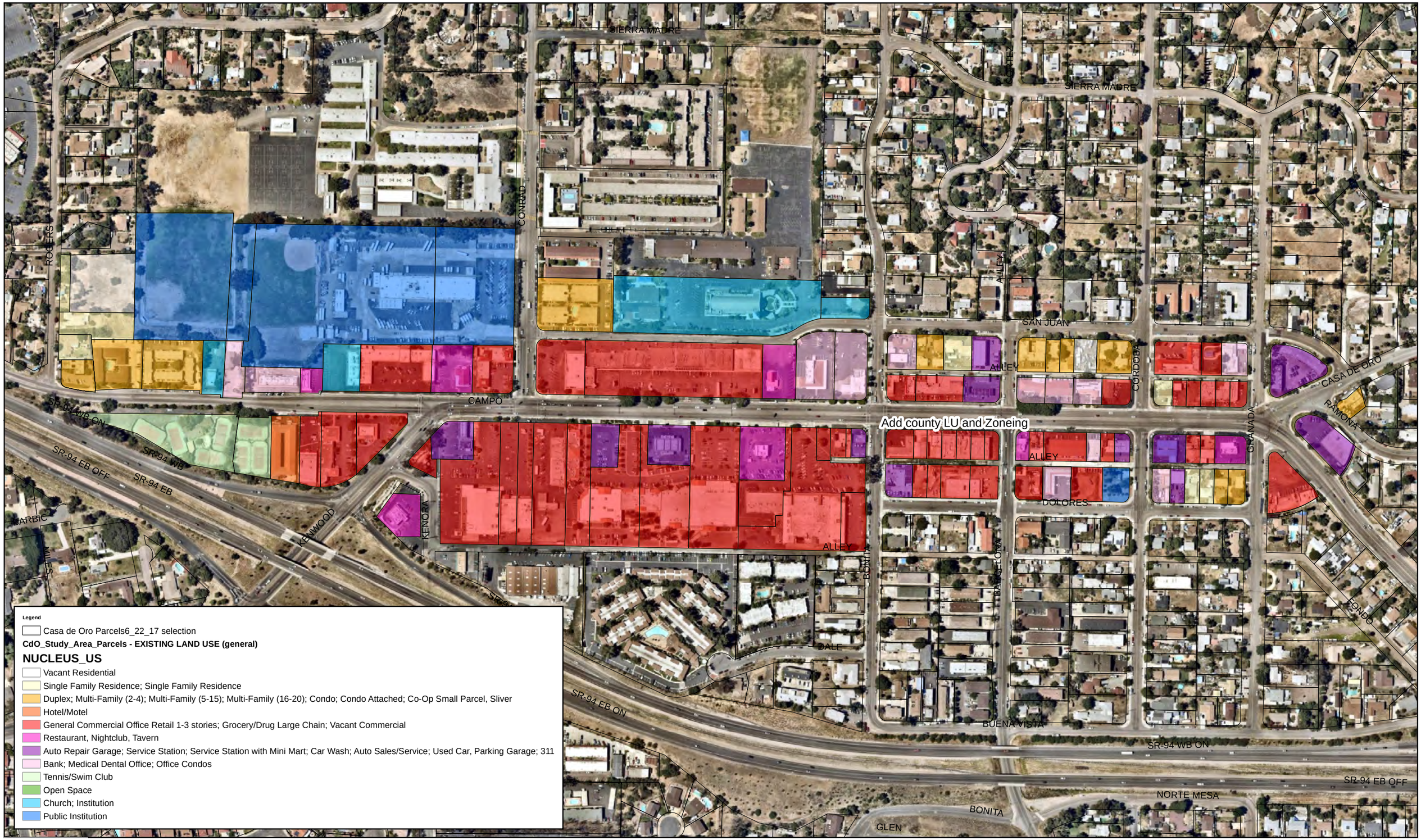
0 50100 200 300
Feet

Source:

Casa de Oro Revitalization Strategy

County Zoning Use Regulations

Exhibit X



Michael Baker INTERNATIONAL

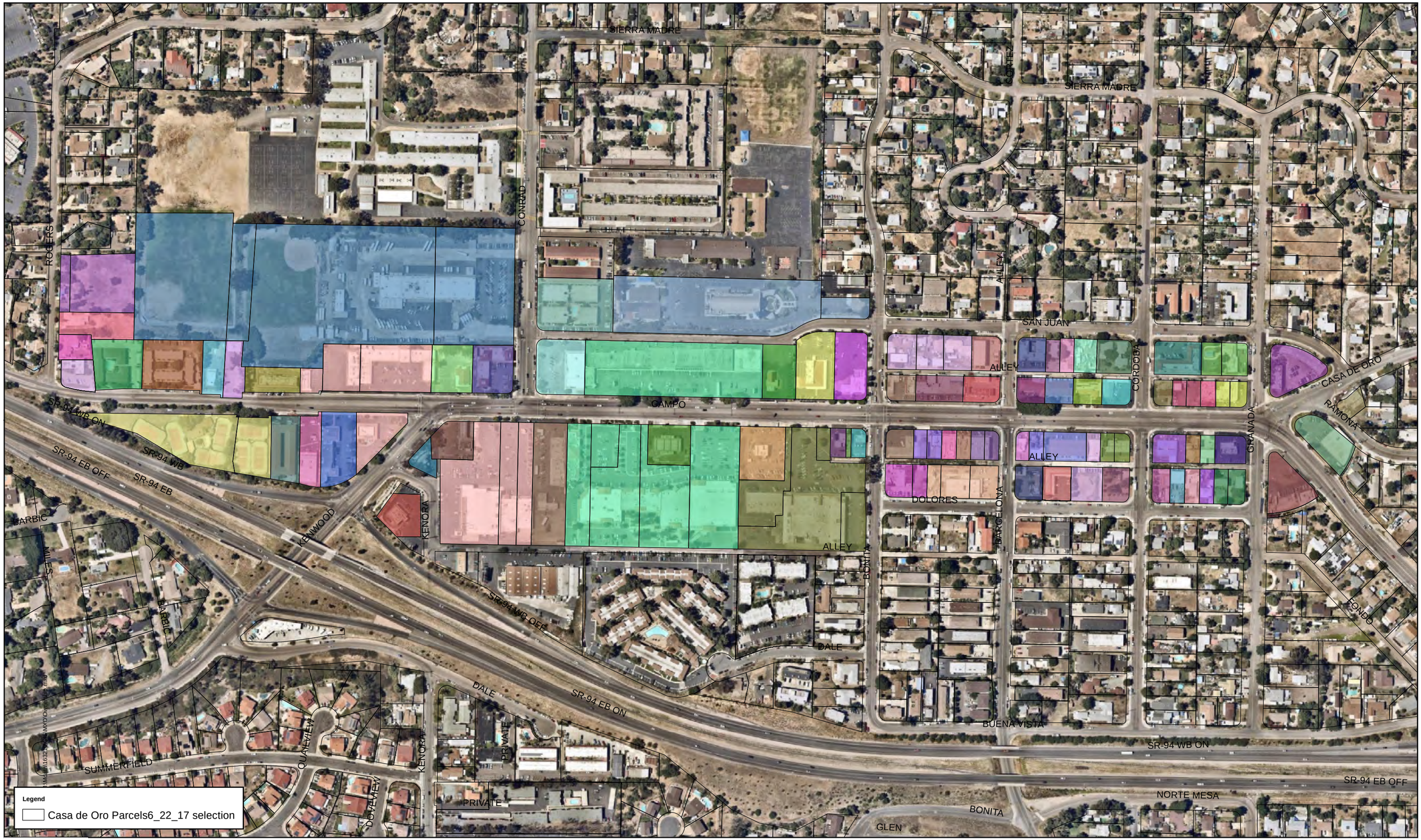
0 50 100 200 300 Feet

Source:

Casa de Oro Revitalization Strategy

Existing Land Use

Exhibit X



Michael Baker INTERNATIONAL

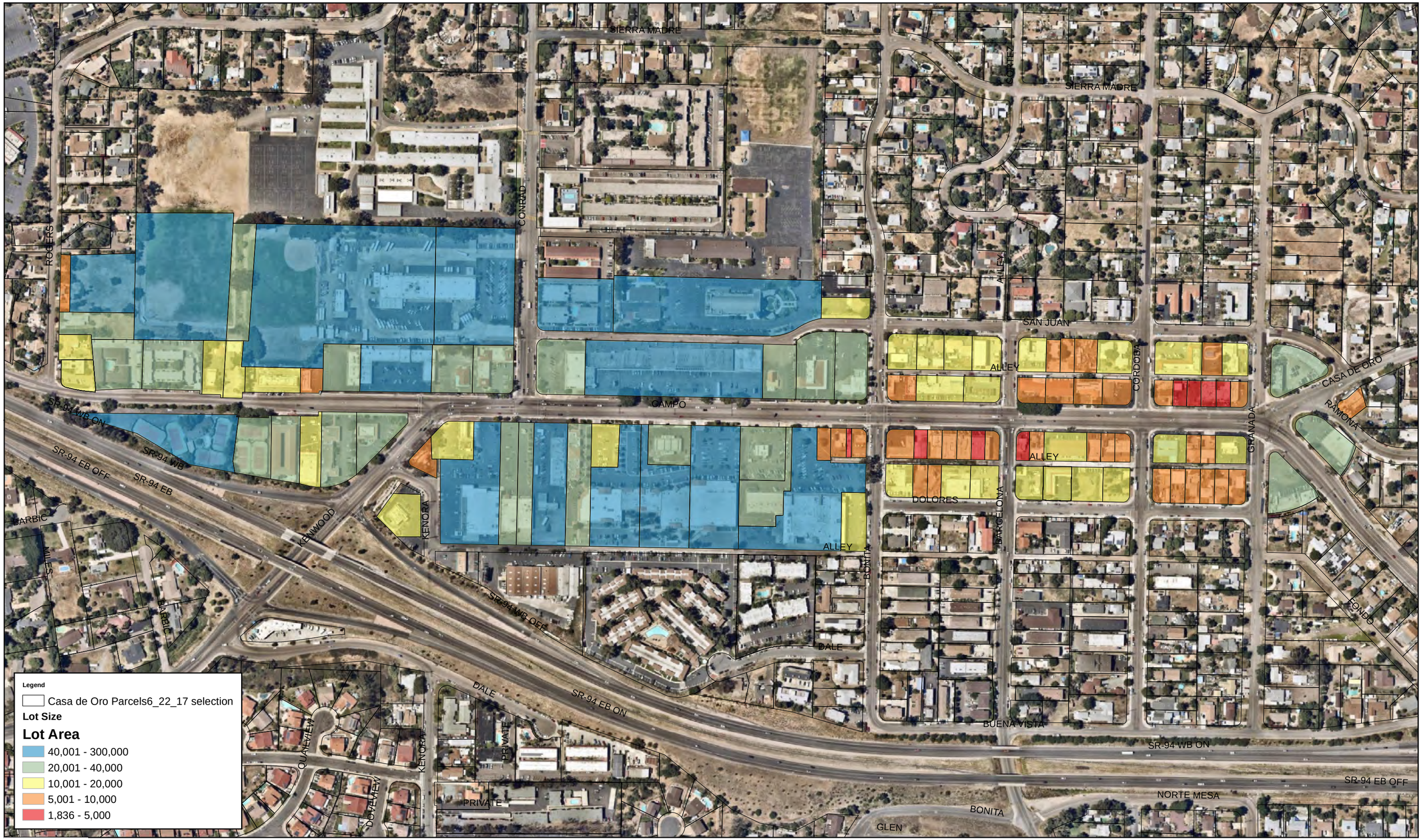
0 50 100 200 300
Feet

Source:

Casa de Oro Revitalization Strategy

Parcel Ownership

Exhibit X



Michael Baker INTERNATIONAL

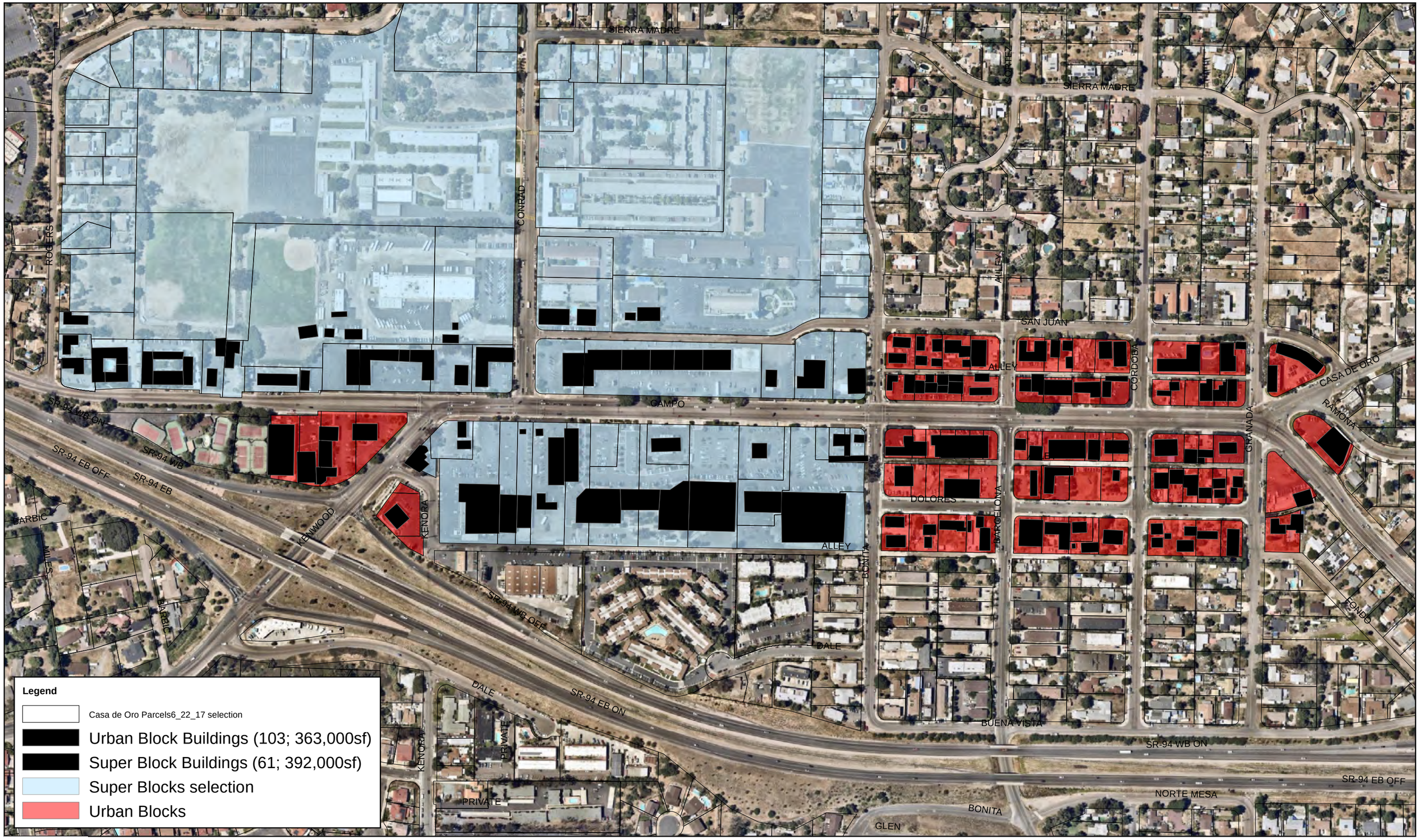
0 50 100 200 300
Feet

Source:

Casa de Oro Revitalization Strategy

Lot Size

Exhibit X



Michael Baker INTERNATIONAL

0 50 100 200 300
Feet

Source:

Casa de Oro Revitalization Strategy

Block Type and Building Patterns

Exhibit X

SIERRA MADRE
CONRAD
ROLLINS
ALLEY
SAN JUAN
ALLEY
CORDOBA
CASA DE ORO
RAMONA
GRANADA
CAMPO
SR-94 WB ON
SR-94 EB OFF
SR-94 WB
SR-94 EB
KENWOOD
KENORA
DOLORES
BARCELONA
ALLEY
BONITA
SR-94 WB OFF
DALE
SR-94 EB ON
PRIVATE
BUENA VISTA
SR-94 WB ON
SR-94 EB OFF
NORTE MESA
BONITA
GLEN

Legend

- Casa de Oro Parcels6_22_17 selection
- Sidewalk
- NoSidewalk
- Urban Block Buildings (103; 363,000sf)
- Super Block Buildings (61; 392,000sf)
- Super Blocks
- Urban Blocks

Michael Baker INTERNATIONAL

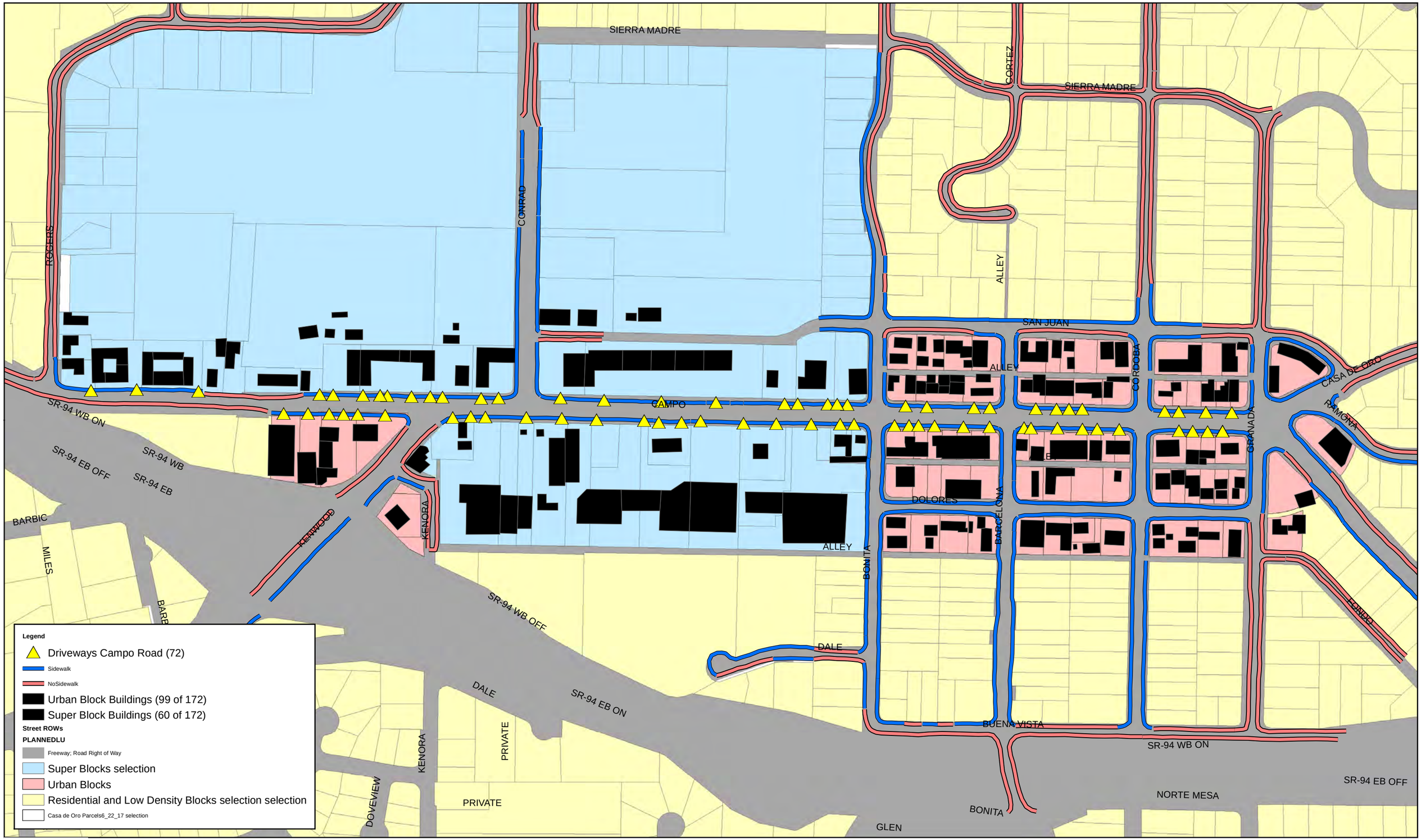
0 50 100 200 300 Feet

Source:

Casa de Oro Revitalization Strategy

Block Type, Building Patterns & Sidewalks

Exhibit X



Michael Baker INTERNATIONAL

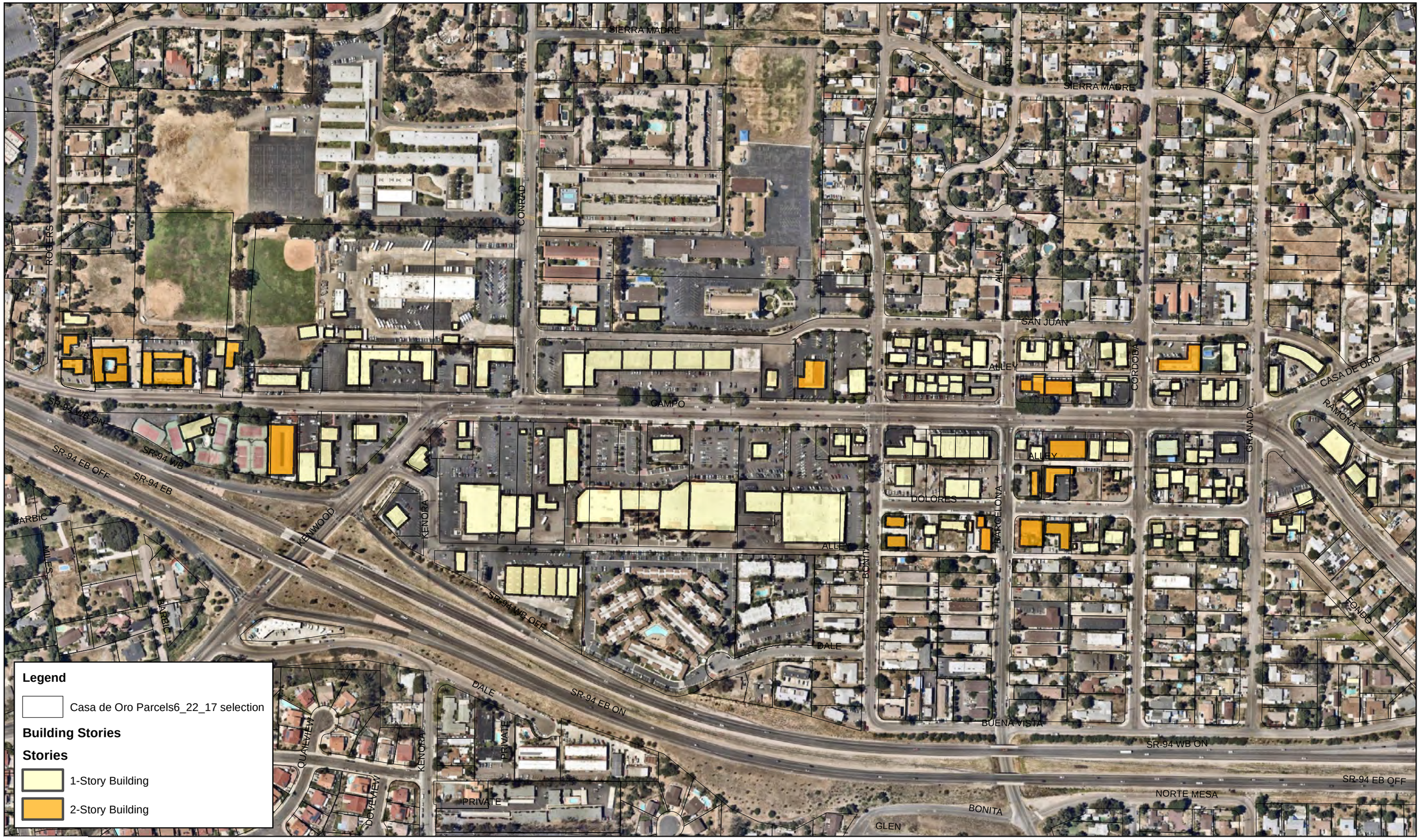
0 50 100 200 300 Feet

Source:

Casa de Oro Revitalization Strategy

Streets, Blocks, Buildings, Sidewalks, Driveways

Exhibit X



Michael Baker INTERNATIONAL

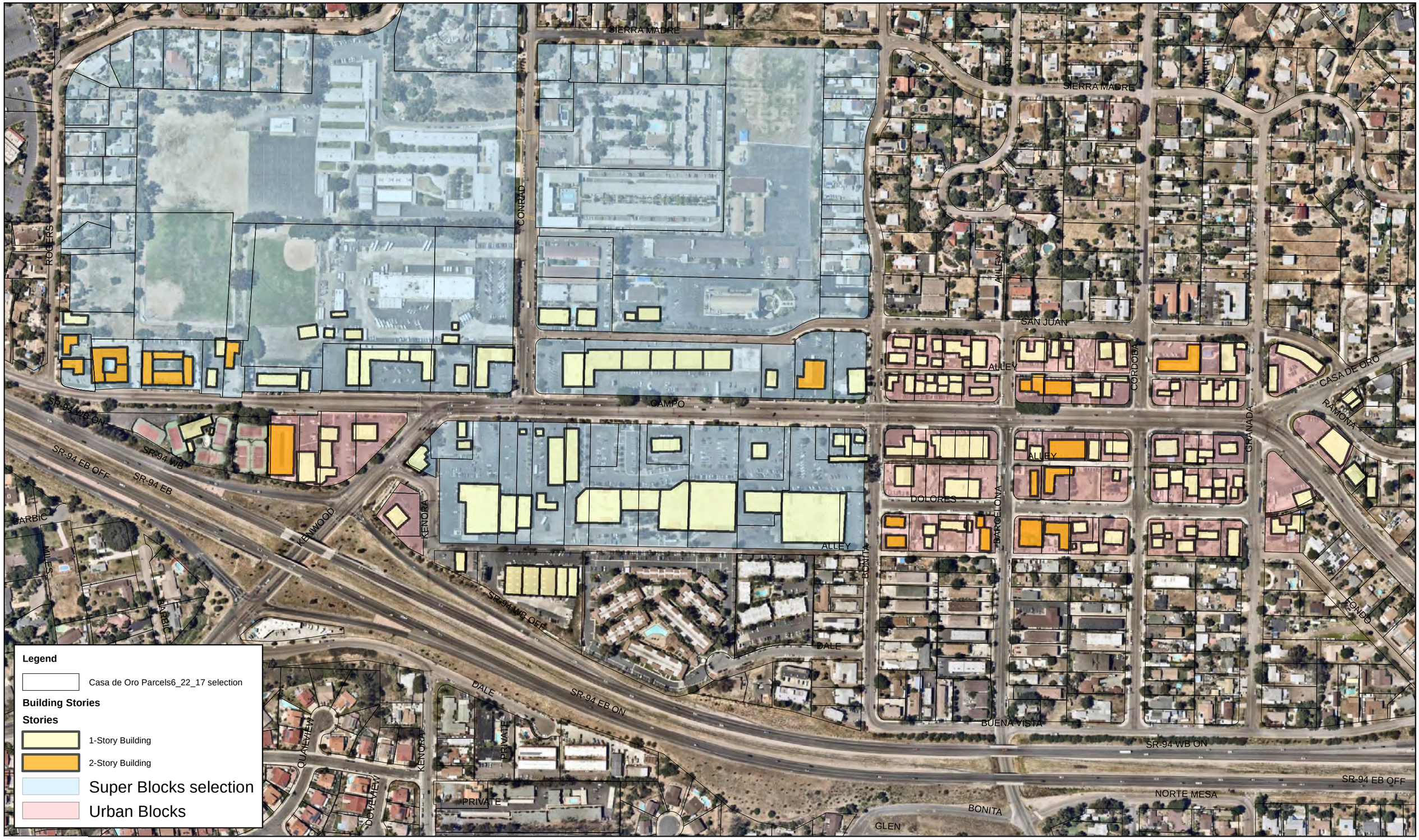
0 50 100 200 300 Feet

Source:

Casa de Oro Revitalization Strategy

Building Height (Stories)

Exhibit X



Michael Baker INTERNATIONAL

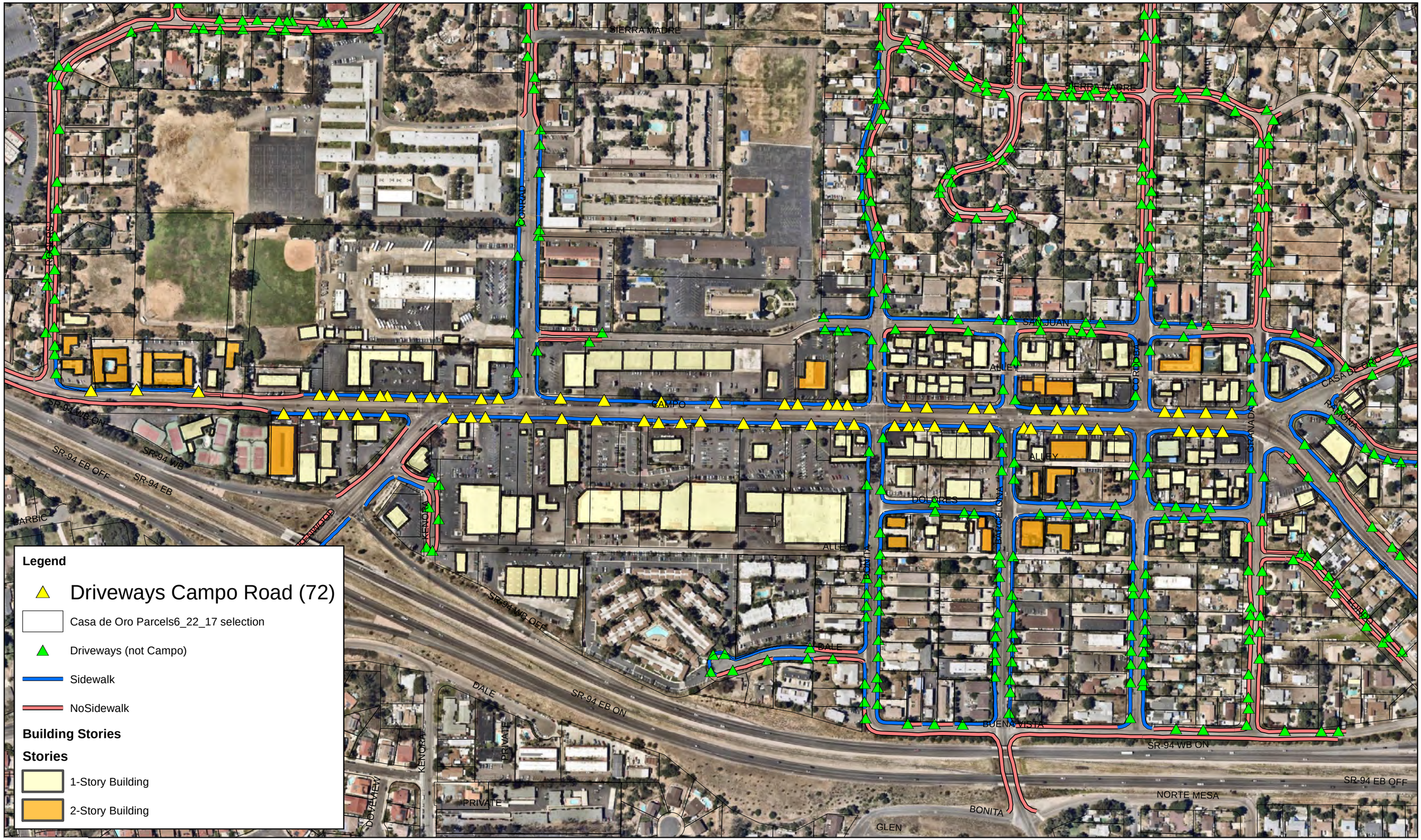
0 50 100 200 300 Feet

Source:

Casa de Oro Revitalization Strategy

Building Height (Stories)

Exhibit X



Legend

- Driveways Campo Road (72)
- Casa de Oro Parcels6_22_17 selection
- Driveways (not Campo)
- Sidewalk
- NoSidewalk

Building Stories

Stories

- 1-Story Building
- 2-Story Building

Michael Baker INTERNATIONAL

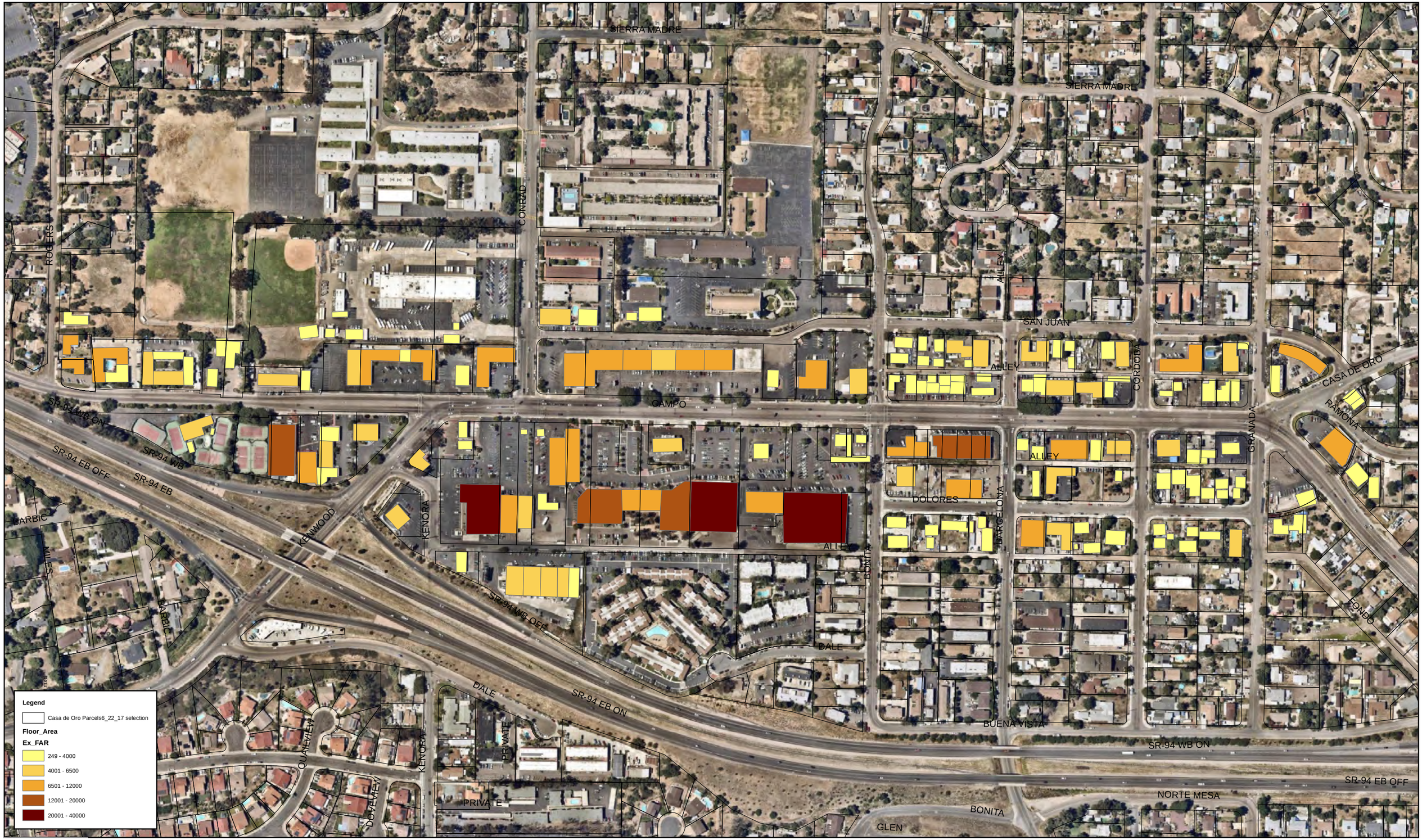
0 50 100 200 300 Feet

Source:

Casa de Oro Revitalization Strategy

Building Height (Stories)

Exhibit X



Michael Baker INTERNATIONAL

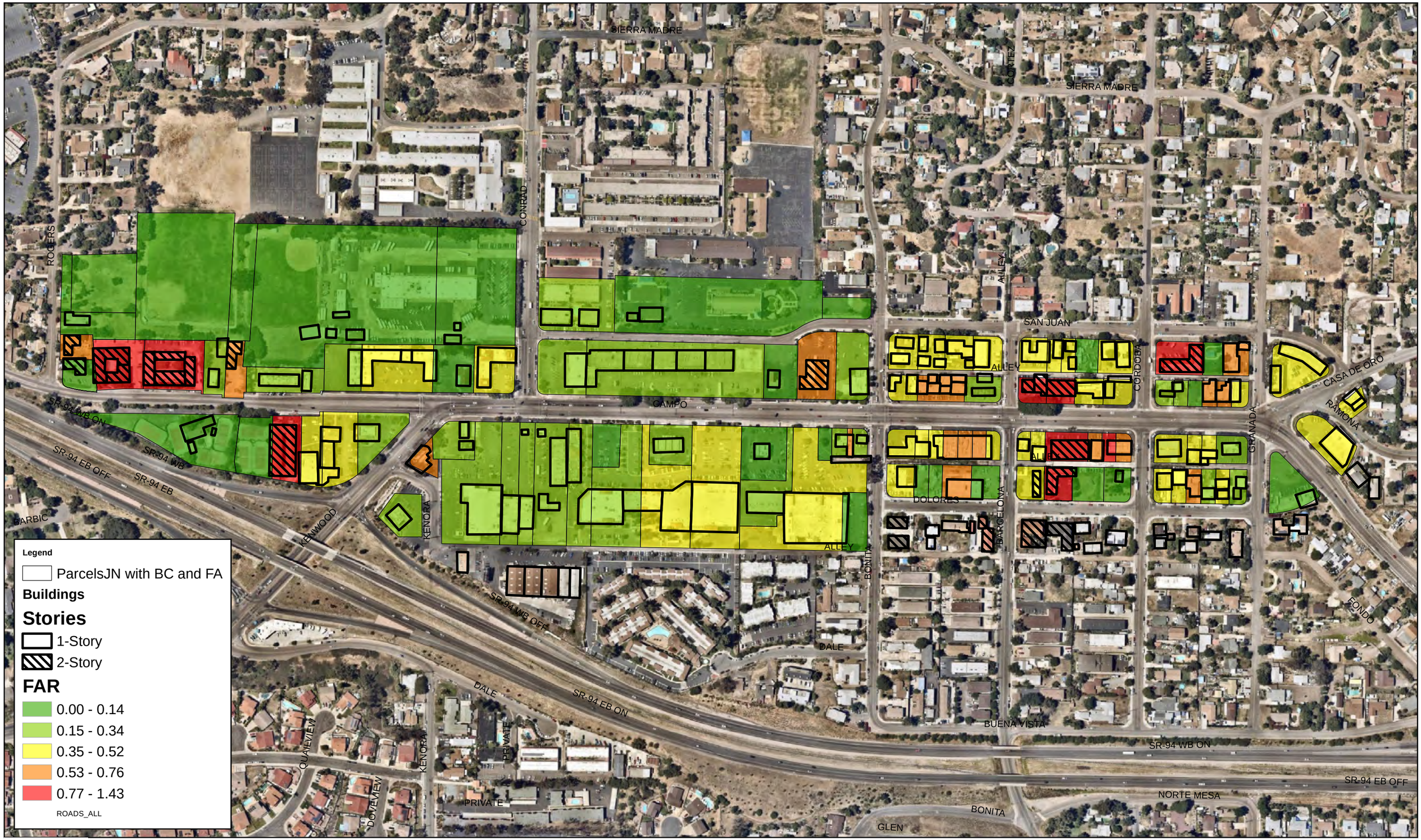
0 50 100 200 300
Feet

Source:

Casa de Oro Revitalization Strategy

Building Size (Gross Floor Area)

Exhibit X



Michael Baker INTERNATIONAL

0 50 100 200 300
Feet

Source:

Casa de Oro Revitalization Strategy

Floor Area Ratio

Exhibit X

SIERRA MADRE
CORTEZ
SIERRA MADRE
ROGERS
CONRAD
ALLEY
SAN JUAN
ALLEY
CORDOBA
CASA DE ORO
RAMONA
CAMPO
Add county LU and Zoneing
SR-94 WB ON
SR-94 EB OFF
SR-94 WB
SR-94 EB
GRANADA
ALLEY
DOLORES
CARBIC
KENWOOD
KENORA
ALLEY
BONITA
BARCELONA
FONDO
SR-94 WB OFF
DALE
DALE
SR-94 EB ON
QUAILVIEW
KENORA
PRIVATE
BUENA VISTA
SR-94 WB ON
SR-94 EB OFF
DOVEVIEW
PRIVATE
NORTE MESA
BONITA
GLEN

Legend

- Buildings with On-Site Parking Counts
- Casa de Oro Parcels6_22_17 selection

On-site Parking

- 129 - 260
- 65 - 128
- 33 - 64
- 16 - 32
- 2 - 15

Michael Baker INTERNATIONAL

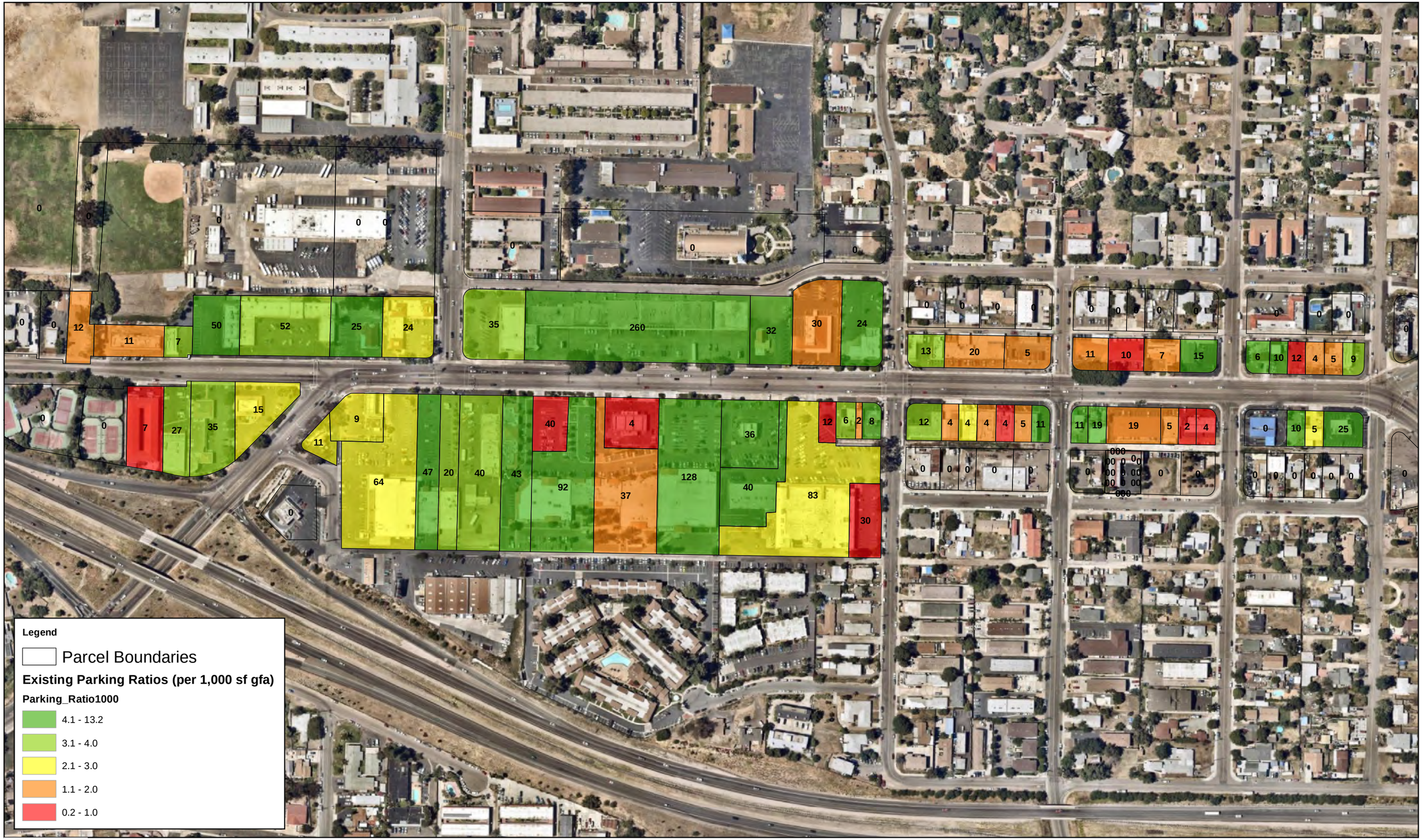
0 50 100 200 300 Feet

Source:

Casa de Oro Revitalization Strategy

Campo Road Buildings and On-site Parking

Exhibit X



Michael Baker INTERNATIONAL

0 25 50 100 150 200 250 Feet

Source:

Casa de Oro Revitalization Strategy

Existing Parking Spaces & Ratios by Lot

Exhibit X

Business Improvement District (BID) Contribution Assessment

CASA DE ORO

CAMPO ROAD REVITALIZATION PLAN

Business Improvement District Contribution Assessment

The Business Improvement District (BID) is funded by property owners in the Business Improvement District. Individual contributions depend on several factors. These include but not limited to:

- Total project cost
- Items the BID selects to fund
- Grants received
- Donations received
- Any contribution by the agencies or organizations
- Impact fees
- In-Lieu fees
- Parking fees
- Prevailing interest rates

The total project cost for Campo Road improvements is shown in **Table 1**. This includes construction costs ($9,738,563) and soft cost ($2,921,569) totaling $12,660,132.

The BID contributions can be calculated in a variety of ways, such as by parcel area, development area, frontage, etc. **Table 2** documents some ways of calculating individual contributions and spans it over 10 to 15 years. It should be noted that these contributions assume that the entire Campo Road redevelopment project cost, as shown in **Table 1,** will be funded by BID. Any funding received from other sources such as grants, donations, or contributions from agencies can impact these contributions. It should also be noted that the calculations are provided for information only and will need a professional BID consultant to calculate actual contributions when a BID is formed.

Table 1: Campo Road Street Improvements- Planning Level Estimation of Cost (July 2021)

Item No.	Item	Quantity	Unit	Unit Price	Total
GENERAL					
1	Mobilization	1	LS	$250,000	$250,000
2	Traffic Control	1	LS	$250,000	$250,000
3	Clearing and Grubbing	1	LS	$300,000	$300,000
4	Storm Water Pollution Control & Erosion Control	1	LS	$15,000	$15,000
EARTHWORK					
5	Unclassified Excavation	1	LS	$250,000	$250,000
GENERAL SURFACE IMPROVEMENTS					
6	Construct 6" Curb & Gutter Type 'G' Per SDRSD G-2	5,500	LF	$38	$209,000
7	Construct 6" Median Curb Type 'B-1' Per SDRSD G-6	5,000	LF	$34	$170,000
8	Construct PCC Curb Ramp Type 'D' Per SDRSD G-31	54	EA	$3,900	$210,600

9	Construct PCC Roundabout Truck Apron Per Detail	3,000	SF	$30	$90,000
10	Asphalt Concrete (AC)	4,375	TN	$130	$568,750
11	Class 2 Aggregate Base (AB)	4,320	CY	$45	$194,400
12	Concrete Cross Gutter per SDRSD G-12	4,000	SF	$15	$60,000
13	Construct Concrete Driveway Type "A" Per SDRSD G-14A	9,200	SF	$13	$119,600
14	4" PCC Sidewalk per SDRSD G-7	40,000	SF	$9	$360,000
15	Install Bus Pad	5	EA	$9,000	$45,000
16	Minor Items	1	LS	$350,000	$350,000
TRAFFIC SIGNALS					
17	New Traffic Signal (Conrad)	1	EA	$340,000	$340,000
18	Signal Modification (Kenwood)	1	EA	$80,000	$80,000
19	HAWK/ RRFB	2	EA	$260,000	$520,000
20	Streetlights (new, adjustments, infrastructure)	1	LS	$300,000	$300,000
21	Signing & Striping	1	LS	$70,000	$70,000
UTILITY RELOCATION					
22	Minor Relocations/Adjustments	1	LS	$250,000	$250,000
STORM DRAIN IMPROVEMENTS					
23	Install 18" RCP	700	LF	$185	$129,500
24	Junction Structures	4	EA	$7,500	$30,000
25	Tree Wells	8	EA	$28,000	$224,000
26	Install Type A Curb Inlet per SDRSD D-01	10	EA	$8,000	$80,000
LANDSCAPE & IRRIGATION					
27	Hardscape (Includes Gateway Elements)	1	LS	$750,000	$750,000
28	Irrigation	1	LS	$375,000	$375,000
29	Planting	1	LS	$1,200,000	$1,200,000
TOTAL					$7,790,850
25% CONTINGENCY					$1,947,713
CONSTRUCTION TOTAL					**$9,738,563**
SOFT COSTS					
1	Preliminary Engineering (Studies, Geotech, Reports, Surveying)			11.0%	$1,071,242
2	Final PS&E			8.0%	$779,085
3	Construction Management & Support			11.0%	$1,071,242
SOFT COST TOTAL					$2,921,569

Assumptions:

1. Water and Sewer Line improvements are not included.
2. R/W costs and acquisitions are excluded and assumed by others.
3. Minor pipe extensions and new inlets are assumed for drainage. Mainline replacement is not assumed.
4. Side Street construction is not included.
5. New pavement is assumed in the widening areas only.

6. Utility relocations are not included.
7. The estimate is based on a conceptual street rendering provided in Chapter 4, **Figure 4-17** of the Campo Road Corridor Revitalization Specific Plan
8. It is assumed that environmental clearance is already obtained

Table 2: Assessment Calculation

Assessment by Number of Parcels (#)	
Total number of parcels in Specific Plan area	129
Total project cost	$12,660,132
Total cost per parcel	$98,141
Cost per parcel per month (10-year span)	$818
Cost per parcel per month (15-year span)	$545

Assessment by Parcel Area (square feet- SF)	
Total area of all parcels in Specific Plan area	2193521.9
Total project cost	$12,660,132
Total cost per SF of land	$6
Cost per SF of land per month (10-year span)	$0.0481
Cost per SF of land per month (15-year span)	$0.0321

Assessment by Frontage on Campo Road (linear feet- LF)	
Total frontage in linear feet on both sides of Campo Road	5,550
Total project cost	$12,660,132
Total cost per LF of frontage	$2,281
Cost per LF of frontage per month (10-year span)	$19
Cost per LF of frontage per month (15-year span)	$13

Assessment by Development- Businesses and Residential (square feet- SF)	
Total development square feet in Specific Plan area (Businesses +Residential)	643,068
Total project cost	$12,660,132
Total cost per SF of development	$20
Cost per SF of development per month (10-year span)	$0.16
Cost per SF of development per month (15-year span)	$0.11

Assessment by Development- Businesses (square feet- SF)	
Total development square feet in Specific Plan area (Only Businesses)	577,068
Total project cost	$12,660,132
Total cost per SF of development	$22
Cost per SF of development per month (10-year span)	$0.18
Cost per SF of development per month (15-year span)	$0.12