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I. INTRODUCTION

I. PURPOSE

This document is an Initial Study (IS) for preliminary evaluation of environmental impacts resulting from implementation of the Mulberry Specific Plan project. For the purposes of this document, this proposed development as described in Section II, Project Description, will be called the "proposed project."

II. CALIFORNIA ENVIRONMENTAL QUALITY ACT REQUIREMENTS

As defined by Section 15063 of the State of California Environmental Quality Act (CEQA) Guidelines, an Initial Study is prepared to provide the Lead Agency with information to use in deciding to prepare either an Environmental Impact Report (EIR) or a Negative Declaration (ND) as the most appropriate environmental documentation for the proposed discretionary action. The City of San Marcos (City) is designated the Lead Agency, in accordance with Section 15050 of the CEQA Guidelines. The Lead Agency is the public agency with the principal responsibility for approving a project that may have significant effects upon the environment.

Through this IS, the City has determined that although the project could have a significant effect on the environment, mitigation has been included to bring all potential impacts to less than significant levels. This determination was made based upon technical analysis, factual data, and other supporting documentation. Therefore, a Mitigated Negative Declaration (MND) is being proposed. The IS/MND will be circulated for a period of 20 days for public review. Comments received on the document will be considered by the City before it acts on the proposed project.

This IS has been prepared in conformance with CEQA of 1970, as amended (Public Resources Code, Section 21000 et. seq.) and Section 15070 of the State Guidelines for Implementation of CEQA of 1970, as amended (California Code of Regulations, Title 14, Chapter 3, Section 15000, et seq.).

III. INTENDED USES OF INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

This IS, along with the attached MND, is an informational document intended to inform City decision-makers, other responsible or interested agencies, and the public of potential environmental effects of the proposed project. The environmental review process has been established to enable public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any potentially adverse impacts.

IV. CONTENTS OF DOCUMENT

This IS/MND is organized to facilitate a basic understanding of the existing setting and environmental implications of the proposed project as follows:

I. INTRODUCTION identifies the City contact persons involved in the process, scope of environmental review, environmental procedures, and incorporation by reference documents.

II. PROJECT DESCRIPTION describes the proposed project. A description of proposed discretionary approvals and permits required for project implementation is also included.

III. ENVIRONMENTAL CHECKLIST FORM presents the results of the environmental evaluation for the proposed project and those issue areas that would have a significant impact, potentially significant impact, a less than significant impact with mitigation incorporation, or no impact.

IV. ENVIRONMENTAL ANALYSIS evaluates each response provided in the environmental checklist form. Each response checked is discussed and supported with sufficient data and analysis. As appropriate, each response discussion describes and identifies specific impacts anticipated with project implementation. In this section, mitigation measures are also recommended, as appropriate, to reduce adverse impacts to levels of "less than significant" where possible.

V. MANDATORY FINDINGS presents Mandatory Findings of Significance in accordance with Section 15065 of the CEQA Guidelines.

VI. PERSONS AND ORGANIZATIONS CONSULTED identifies those persons consulted and involved in preparation of this IS.

VII. REFERENCES lists bibliographical materials used in preparation of this document.

VIII. MITIGATED NEGATIVE DECLARATION

IX. FINDINGS

V. SCOPE OF ENVIRONMENTAL ANALYSIS

For evaluation of environmental impacts, each question from the environmental checklist form is stated and responses are provided according to the analysis undertaken as part of the Initial Study. All responses take into account the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Project impacts and effects will be evaluated and quantified, when appropriate. To each question, there are four possible responses, including:

1. **No Impact:** A "No Impact" response is adequately supported if the referenced information sources show that the impact simply does not apply to the proposed project.

2. **Less Than Significant Impact:** Development associated with project implementation will have the potential to impact the environment. These impacts, however, will be less than the thresholds that are considered significant and no additional analysis is required.

3. **Less Than Significant With Mitigation Incorporated:** This applies where incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The Lead Agency must describe the mitigation measures and explain how the measures reduce the effect to a less than significant level.

4. **Potentially Significant Impact:** Future implementation will have impacts that are considered significant and additional analysis and possibly an EIR are required to identify mitigation measures that could reduce these impacts to less than significant levels.

VI. PERMITS AND ENTITLEMENTS FOR PROJECT APPROVAL

Agency	Discretionary Action
City of San Marcos	• General Plan Amendment (GPA 13-006) • Zoning Ordinance Amendment (R 13-004) • Adoption of the Specific Plan (SP 13-004) • Multifamily Site Development Plan (MFSDP 13-002) • Tentative Subdivision Map (TSM 13-003) • Adoption of Mitigated Negative Declaration • Adoption of Mitigation Monitoring and Reporting Program

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II. PROJECT DESCRIPTION

A. PROJECT LOCATION AND SETTING

The 10.01-acre project site for the Mulberry Specific Plan is located in the City of San Marcos in North San Diego County, generally north of Mission Road and west of Mulberry Drive. The project site is undeveloped.

The project site is bounded on the west by Mulberry Drive, on the east by existing homes on Borden Circle, on the north by existing homes of Prado Verde and Laguna Drive, and on the south by existing office/professional buildings and undeveloped land (**Figure 1 – Project Location and Vicinity**).

B. PROJECT DESCRIPTION

The Mulberry Specific Plan project proposes a residential condominium project of 126 residential units with a mix of attached and detached style residences. (**Figure 2 – Residential Site Development Plan**). The project is proposed to be constructed as a single-phase development.

Objectives of the project, as identified in the Specific Plan include:

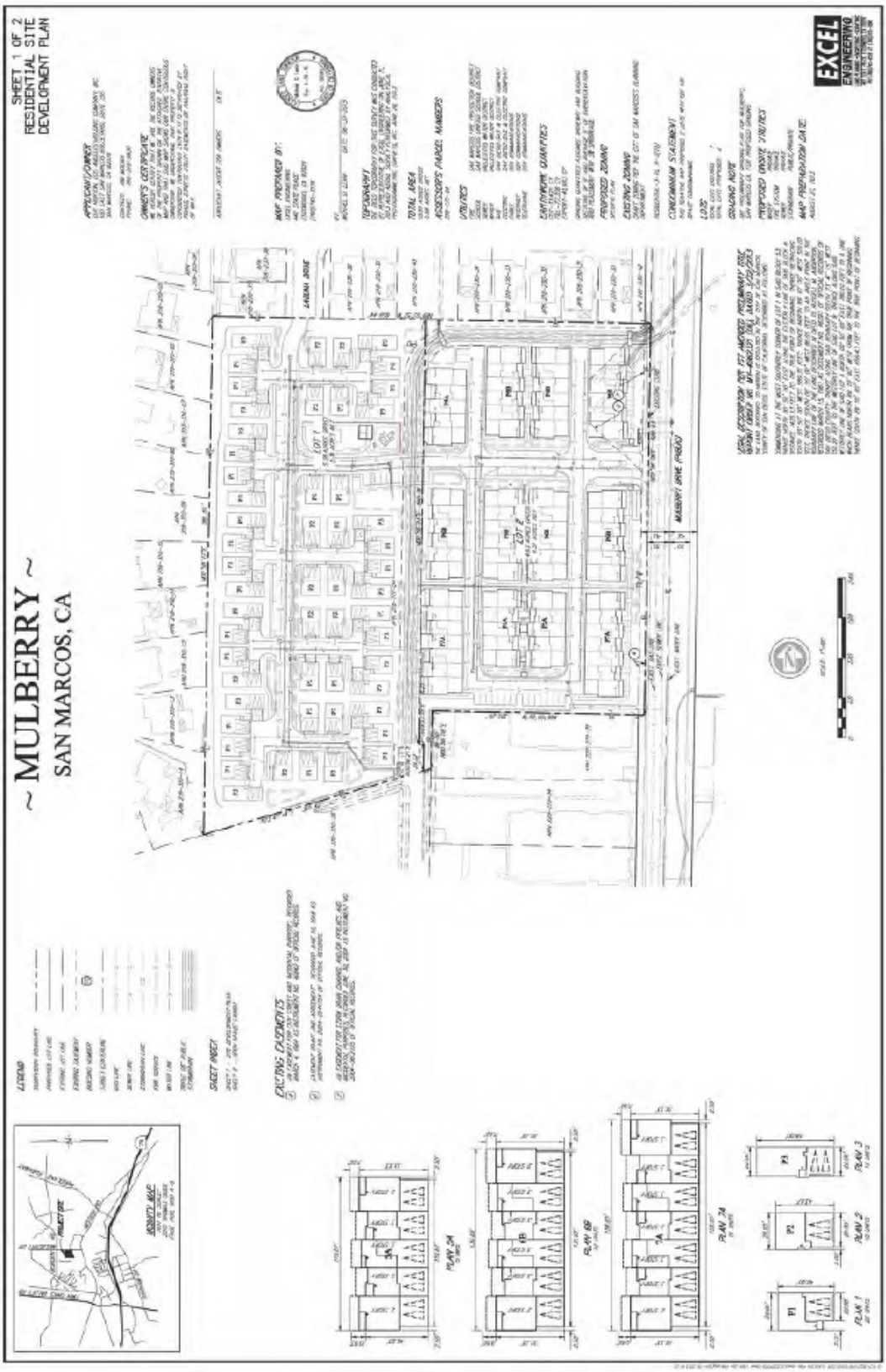
- Incorporate a less dense multi-family residential development into the neighborhood that serves as a transitional residential use to the surrounding low-density residential neighborhood;
- Provide a variety of housing opportunities through a range of unit sizes and a number of different bedroom counts including, two, three, and four bedroom units, and a range of affordability to accommodate a full spectrum of family demographics and the growing housing needs of the region;
- Create a desired buffer to the adjacent developments and businesses by providing a logical transition of attached and detached condominium units between the commercial and light industrial uses to the south and the single family residential development to the north and west and planned residential development to the east;
- Provide a visually pleasing high-density development through architectural design, unified landscape theme, and recreation areas;
- Design a safe and efficient circulation system that adequately supports the anticipated level of traffic in and around the Plan area that is pedestrian safe; and
- Develop a financing plan that provides for the efficient and timely provision of infrastructure and public services as development occurs.

Detached Residential - The project proposes 55 single-family detached condominium homes on the western portion of the project site. The detached homes will range from 1,685 to 2,000 square feet (s.f.) and feature three or four bedrooms, depending on the home plan and layout. The detached homes will have two stories and will be under 24 feet in height.

Attached Residential - The project proposes 71 attached multi-family condominium homes on the eastern portion of the project site. The attached homes will range from 1,851 to 2,183 s.f. and feature three or four bedrooms, depending on the home plan and layout. The attached homes will be three stories with a maximum height of under 38 feet.

Figure 1. Project Location and Vicinity

Figure 2. Residential Site Development Plan



Parking – A total of 300 parking spaces are proposed as part of the project. This includes two covered spaces for each residential unit (252 spaces) plus an additional 48 guest parking spaces.

Recreation Component – A private recreation area is proposed in the north central portion of the project site and will be for the exclusive use of project residents and their guests. There will be a recreation area with a pool, restroom building, BBQs, tot lot and benches. A meandering paseo is also incorporated into the project design.

Proposed Roadways – Primary access to the project site will be via Mulberry Drive. A secondary emergency access driveway is proposed near the northwest corner of the project site and will connect to Laguna Drive via a secured gate. The internal road widths are generally 24 feet wide.

Utility Infrastructure – The project will connect to existing Vallecitos Water District (VWD) infrastructure for water and sewer service. VWD has an existing water connection and will provide service to the site through a line in Mulberry Drive. Onsite water circulation will be through an 8-inch pipe. VWD maintains an existing sewer line in Mulberry Drive and the project will tie into that line for sewer service via an 8-inch private line. As part of the project a segment of water pipeline and a segment of sewer pipeline will be upgraded. Specifically, a 465-foot segment of 6-inch wastewater pipeline will be upgraded to an 8-inch pipeline within Mulberry Drive. ~~Additionally, the project will upsize 1,538 feet of 8-inch wastewater pipeline in Mission Road to a 10-inch pipeline.~~

Water Quality Management – The project includes a comprehensive water quality management approach. The project incorporates bioretention features of various sizes for water quality and hydrology purposes. A total of 16,998 s.f. of bioretention areas are proposed on the project site. Additionally, the project will implement a variety of source control Best Management Practices (BMPs) to minimize the potential for pollutants such as sediment, trash, metals, bacteria, oil/grease and organics to reach the storm drain and off-site waterways.

Grading – Grading for the development associated with the Specific Plan includes 33,425 cubic yards (cy) of cut and 77,358 cy of fill with 43,933 cy of import. The import is expected to last for 30 days, with 100 truck trips per work day. A haul route permit from the City will be required for the import.

In conjunction with the grading the project will be installing a public storm drain system consistent with the City of San Marcos Drainage Master Plan. This storm drain will be triple 66-inch cast-in-place pipes.

Off Site Improvements – The following offsite improvements will be required for the project:

- Upsize approximately 465 feet of an existing 6-inch diameter water main to an 8-inch diameter main in Mulberry Drive.
- ~~Upsize approximately 1,538 feet of existing 8-inch collection pipeline in Mission Road to a 10-inch sewer pipeline.~~

Discretionary Actions – Discretionary approvals required for the project include:

- General Plan Amendment (GPA 13-006) to change the project site from MDR2 (15.1 – 20.0 du/acre) to MDR1 (12.1 – 15 du/acre) with a Specific Plan Area
- Zoning Ordinance Amendment (R 13-004) to change the project site from R-3-10 to Specific Plan
- Adoption of the Specific Plan (SP 13-004)
- Multifamily Site Development Plan (MFSDP 13-002)

- Tentative Subdivision Map to create two lots (TSM 13-003)
- Adoption of Mitigated Negative Declaration
- Adoption of Mitigation Monitoring and Reporting Program

Project Design Features – Finally, the project includes design considerations and will adhere to applicable regulatory requirements, as identified in **Table 1**.

Table 1. Design Considerations for the Project

Aesthetics • Lighting plan to be revised and approved by the Planning Director.
Air Quality • The project shall implement dust control measures. These measures include watering of active grading sites and unpaved roads a minimum of twice daily, replacement of ground cover as quickly as possible, reducing speeds on unpaved roads/surfaces to 15 miles per hour or less, and reducing dust during unloading and loading operations. • Low-VOC coatings shall be used for all buildings, as required under SDAPCD Rule 67.0.
Geology and Soils The project applicant shall follow the recommendations within the Geotechnical Report prepared for the proposed project by GeoTek, Inc. dated June 27, 2013. Specific guidelines related to remedial grading and undocumented fill are listed below. • Remedial Grading: Prior to placement of fill materials, the upper loose and compressible materials should be removed for structural site areas. Removal depths in areas of existing undocumented fill, alluvium, colluvium and weathered bedrock, if encountered, are estimated to be up to approximately 5 feet below existing grade across the site with localized areas in the western portion of the site estimated to be less than 5 feet. The western portion of the site is located in a cut area based on review of the preliminary grading plan; therefore, removal of unsuitable materials in this area will be accomplished by grading to the proposed profile. The lateral extent of removals beyond the outside edge of all settlement-sensitive structures/foundations should minimally be equivalent to that vertically removed. Depending on actual field conditions encountered during grading, locally deeper and/or shallower areas of removal may be necessary. At a minimum, building pads located in cut areas and the cut portion(s) of any transition building pad areas in site bedrock or natural material(s) should be overexcavated a minimum of 5 feet below finish pad grade or a minimum of 3 feet below the bottom of the deepest proposed footing, whichever is deeper. Overexcavations should extend a minimum of 5 feet outside the proposed building envelope(s). The intent of the recommended overexcavation is to support the improvements on engineered fill with relatively uniform engineering characteristics and decrease the potential for future differential settlement. The bottom of all removals should be scarified to a minimum depth of 6 inches, brought to at or above optimum moisture content, and then compacted to minimum project standards prior to fill placement. The remedial excavation bottoms should be observed by a GeoTek representative prior to scarification. The resultant voids from remedial grading/overexcavation should be filled with materials placed in accordance with Section 5.2.4 Engineered Fill of the Geotechnical report. • Engineered Fill: Onsite materials are generally considered suitable for reuse as engineered fill provided they are free from vegetation, roots, and rock/concrete or hard lumps greater than 6 inches in maximum dimension. The earthwork contractor should have the proposed excavated materials to be used as engineered fill at this project approved by the soils engineer prior to placement. Engineered fill materials should be moisture conditioned to optimum moisture content or slightly above and compacted in horizontal lifts not exceeding 8 inches in loose thickness to a minimum relative compaction of 90% as determined in accordance with laboratory test procedure ASTM D 1557. If fill is being placed on slopes steeper than 5:1 (h:v), the fill should be properly benched into the existing slopes and a sufficient size keyway shall be constructed in accordance with the recommendations of the soils engineer.

Hazards/Hazardous Materials

- Debris piles on the project site (soil, concrete, metal pipes, drums, etc.) shall be collected and disposed from the target property in accordance with federal, state, and local regulations.
- Implementation of the Fire Protection Plan for the project.

Hydrology/Water Quality

- The project will be required to provide a design to mitigate water quality and HMP under the land development requirements deemed to be in effect of the Regional Stormwater permit R9 2013-0001 and the currently adopted Standard Urban Stormwater Mitigation Plan (SUSMP).
- Mark all inlets with the words "No Dumping! Drains to Waterways" and "No Contamine" in Spanish.
- Landscaping has been designed to minimize irrigation and runoff and to minimize the use of fertilizers and pesticides that can contribute to storm water.
- Sidewalks, parking lots and roads shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing will be collected to prevent entry into the storm drain system. Wash water containing any cleaning agents or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.
- Trash container area to be screened or walled to prevent off-site transport of trash.
- Provide roofs, awnings or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers
- Post signs on all dumpsters information residents that hazardous material are not to be disposed of therein
- Implementation of all construction-related BMPs identified in the SWPPP.

Noise

- All construction equipment shall be properly fitted with mufflers.

Public Services – Fire

- Roadways serving the project shall have a minimum improved paved width of 24 feet with an additional 8 feet to each side for parking. Any other roadway features such as cul-de-sacs and gates must meet the design criteria of the San Marcos Fire Department.
- Any automatic gates are required to have a Knox rapid entry system and emergency vehicle strobe detector.
- Fire hydrants with an adequate water supply must be installed at locations approved by the San Marcos Fire Department. Hydrant spacing shall be 300 feet apart for multi-family areas. For single-family areas, hydrants shall be spaced 600 feet apart.
- Residential structures shall be outfitted with fire sprinklers per California Building Code 2010 edition and City Ordinance.

Utilities and Services Systems

- Upsize approximately 465 feet of an existing 6-inch diameter water main to an 8-inch diameter main in Mulberry Drive.
- ~~Upsize approximately 1,538 feet of existing 8-inch collection pipeline in Mission Road to a 10-inch sewer pipeline.~~
- Payment of Water Capital Facility Fees per Vallecitos Water District Ordinance No. 175.
- Payment of Wastewater Capital Facility Fees per Vallecitos Water District Ordinance No. 176.
- Payment of Wastewater Density Impact Fees per Vallecitos Water District Ordinance No. 177.

III. ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. **Project Title:** Mulberry Specific Plan

2. **Lead Agency Name and Address:**
   City of San Marcos
   1 Civic Center Drive
   San Marcos, CA 92069

3. **Contact Person and Phone Number:**
   Mr. Garth Koller, Principal Planner
   760-744-1050, ext. 3231
   GKoller@san-marcos.net

4. **Project Location:** The 10.01-acre project site for the Mulberry Specific Plan is located in the City of San Marcos in North San Diego County, generally north of Mission Road and west of Mulberry Drive. Specifically, the project site is bounded on the east by Mulberry Drive, on the west by existing homes on Borden Circle, on the north by existing homes of Prado Verde and Laguna Drive, and on the south by existing office/professional buildings and undeveloped land.

5. **Project Sponsor's Name and Address:**
   D.R. Horton, Los Angeles Holding Company, Inc.
   100 East San Marcos Boulevard, Suite 350
   San Marcos, CA 92078

6. **General Plan and Zoning Designations:** The project site is designated MDR2 (15.1 – 20.0 du/acre) Residential) in the General Plan. The zoning on the project site is R-3-10 (20.1 to 30 du/acre). The project proposes a residential condominium project under a Specific Plan. The Specific Plan would serve as the guiding land use document for the project site. A General Plan Amendment and Rezone would be required for approval of the project and to change the site from a General Plan designation from MDR2 to MDR1 (12.1 – 15 du/acre) with a Specific Plan Area and to change the zoning designation from R-3-10 to Specific Plan Area.

7. **Description of Project:** Please see Section II for project description.

8. **Surrounding Land Uses and Setting:** The project site is located in a developed portion of the City. There are existing single-family residences to the north and west of the project site. South of the project site are existing office/professional buildings and undeveloped land. East of the project site is Mulberry Drive and across from that is the Mission Hills Church (east/northeast) and the Hollandia Dairy (east/southeast).

9. **Other Public Agencies Whose Approval is Required:** None

B. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Mitigated to Below a Level of Significance," as indicated by the checklist on the following pages. All impacts identified for the project will be mitigated to below a level of significance.

☐ Aesthetics	☐ Agriculture/Forestry Resources	☐ Air Quality
☐ Biological Resources	☒ Cultural Resources	☐ Geology/Soils
☐ Greenhouse Gas	☐ Hazards/Hazardous Materials	☐ Hydro/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☒ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Utilities/ Services Systems	
☒ Mandatory Findings of Significance		

C. DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Garth Koller, Project Planner

Date: April 4, 2014

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the proposal:				
a) Have a substantial adverse effect on a scenic vista?				**X**
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				**X**
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			**X**	
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			**X**	
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest Legacy Assessment Project and the carbon measurement methodology provided in Forest Protocols adopted by the California Air resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				**X**
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined in Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				**X**
d) Result in the loss of forest land or conversion of forest land to non-forest use?				**X**
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				**X**
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			**X**	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?				X
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			**X**	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				**X**
ii) Strong seismic ground shaking?			**X**	
iii) Seismic-related ground failure, including liquefaction?				**X**
iv) Landslides?				**X**
b) Result in substantial soil erosion or the loss of topsoil?				**X**
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			**X**	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			**X**	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				**X**
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			**X**	
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			**X**	
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?			**X**	
b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			**X**	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				**X**

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			**X**	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				**X**
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				**X**
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			**X**	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				**X**
IX. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?			**X**	
b) Have a potentially significant adverse impact on groundwater quality or cause or contribute to an exceedance of applicable groundwater receiving water quality objectives or degradation of beneficial uses?			**X**	
c) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				**X**
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			**X**	
e) Create a significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes?			**X**	
f) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?			**X**	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			**X**	
h) Result in increased impervious surfaces and associated increased runoff?			**X**	
i) Result in significant alteration of receiving water quality during or following construction?			**X**	
j) Result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).			**X**	
k) Be tributary to an already impaired water body as listed on the Clean Water Act Section 303(d) list? If so, can it result in an increase in any pollutant for which the water body is already impaired?			**X**	
l) Be tributary to environmentally sensitive areas (e.g., MSCP, RARE, Areas of Special Biological Significance, etc.)? If so, can it exacerbate already existing sensitive conditions?			**X**	
m) Have a potentially significant environmental impact on surface water quality, to either marine, fresh or wetland waters?			**X**	
n) Otherwise substantially degrade water quality?			**X**	
o) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				**X**
p) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				**X**
q) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				**X**
r) Inundation by seiche, tsunami, or mudflow?				**X**
X. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?				**X**
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			**X**	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				**X**

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?				**X**
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				**X**
XII. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		**X**		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			**X**	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			**X**	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			**X**	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				**X**
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				**X**
XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			**X**	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				**X**
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				**X**
XIV. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?			**X**	
b) Police protection?			**X**	
c) Schools?			**X**	
d) Parks?			**X**	
e) Other public facilities?			**X**	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?			**X**	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?			**X**	
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			**X**	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?			**X**	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				**X**
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				**X**
e) Result in inadequate emergency access?			**X**	
f) Result in inadequate parking capacity?			**X**	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				**X**
XVII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			**X**	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			**X**	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			**X**	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?			**X**	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			**X**	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			**X**	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				**X**
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		**X**		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			**X**	
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?		**X**		

IV. ENVIRONMENTAL ANALYSIS

This section provides an evaluation of the impact categories and questions contained in the Environmental Checklist.

I. AESTHETICS

a) Have a substantial adverse effect on a scenic vista? No Impact

The project is located in a developed portion of the City which includes a mix of developed uses including residential developments to the east and north, and office/professional buildings and undeveloped land to the south. The site is currently vacant. Scenic resources and vistas within the City are primarily associated with primary and secondary ridgelines, which are identified via a Ridgeline Protection and Management Overlay Zone (ROZ). The project is located in lower elevation and flat part of the City and is not located on, or near, any of the protected ridgelines (Figure 4-5 of the General Plan). The project site and vicinity are not identified as a scenic vista point or area, respectively, by the City. Thus the project would not result in a substantial adverse effect on a scenic vista and no impacts are identified.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway? No Impact

The project site is located approximately 0.5 miles north of State Route 78 (SR-78). A portion of SR-78 is recognized as a Scenic Highway by Caltrans; however, that portion is not in the project vicinity. The portion identified as a Scenic Highway is approximately 50 miles east of the project site near Anza Borrego (Caltrans 2013). Thus the project would not impact a State Scenic Highway.

At a local level, SR-78 is designated by the City as a view corridor. The highway corridor provides view of the Merriam Mountains, Mount Whitney, Double Peak, CSUSM and Palomar Community College. The proposed development would not impact views to these peaks from SR-78 since it is situated at a lower elevation.

The City's ROZ is designed to protect natural viewsheds and unique natural resources, and to minimize physical impacts to select primary and secondary ridgelines. These protected primary and secondary ridgelines are shown on Figure 4-5 of the Conservation and Open Space Element of the City's General Plan. Development is not proposed on areas identified as primary or secondary ridgeline.

The project site is vacant and does not support any historic buildings. The cultural resources report for the project did not identify any historic buildings on the project site. Therefore, the project would not damage any historic buildings.

In addition, the project site does not support any significant trees, rock outcroppings or historic buildings as identified or protected by the City's General Plan. Therefore, no impact is identified.

c) Substantially degrade the existing visual character or quality of the site and its surroundings? Less than Significant Impact

The project is located in a developed portion of the City which includes a mix of developed uses including single family residential, commercial/office as well as a church and dairy. The project site is currently undeveloped.

The project proposes a residential density of 12.6 dus/acre with two and three story residential buildings. This is lower than the density allowed on the project site, which allows for up to 20.0 du/acre. The project site represents an area of transition from single-family residential to the north and west to office/commercial uses to the south.

The Mulberry Specific Plan includes Design Guidelines that cover such items as setbacks, heights and stories, lot coverage, parking, open space, and building materials. Units will consist of a mix of two and three story single-family detached units as well as a maximum of three stories in the multi-family attached condominium units.

Attached condominium dwelling units have four different plan styles for the buildings, which give them a varied and interesting visual appeal. Single-family detached condominium dwelling units also are built in several different style units. These variations between the detached units will give the West Lot visual distinction from the detached units as well as variety and distinction from the attached units on the East Lot. Detached condominium units will all be two-story units of varying sizes. These units will come in three styles: Spanish Eclectic, Cottage, and Ranch and six architectural facade styles: Traditional, Spanish Eclectic, Cottage, Ranch, Tuscan, and Regency. Building materials will set the tone and vision of the built environment. These materials will be used to create visually pleasing residential condominium dwelling units that help blend the structures with the surrounding neighborhoods and set the tone for the development of the nearby commercial and light industrial uses. Both the detached condominium units and the attached multi-family condominium units will be constructed using standard wood framed construction. Roofing materials will consist of low profile concrete tiles, concrete shake tiles, or concrete slate tiles depending on the style of units. Other building materials will include stucco lightlace finish on the exterior of all buildings, wood trim, brick and mortar, decorative metal, wood shutters, and metal bird stop 'S' tiles. Materials and colors will vary from structure to structure to prevent a repetitive look throughout the Specific Plan Area breaking up the bulk and scale of the project. Minimum setbacks have been established to give the Plan Area separation between buildings, as well as create a buffer zone between neighboring developments. The Specific Plan also includes landscaping and walls, fences and monuments design guidelines providing a unified landscaping theme and incorporates active and passive open space throughout the site. Through implementation of the Specific Plan Design Guidelines, the project will not substantially degrade the existing visual character or quality of the site and surrounding area, and impacts are less than significant.

Figure 3 depicts sample architectural elevations of both the attached and detached product. Additional elevations for each building type (attached and detached) are included in Section 3.2.2 of the Specific Plan (Appendix A of this document). **Figure 4** depicts the proposed landscape plan. Please see Section 3.3. of the Specific Plan for detailed plant palette information (Appendix A to this document).

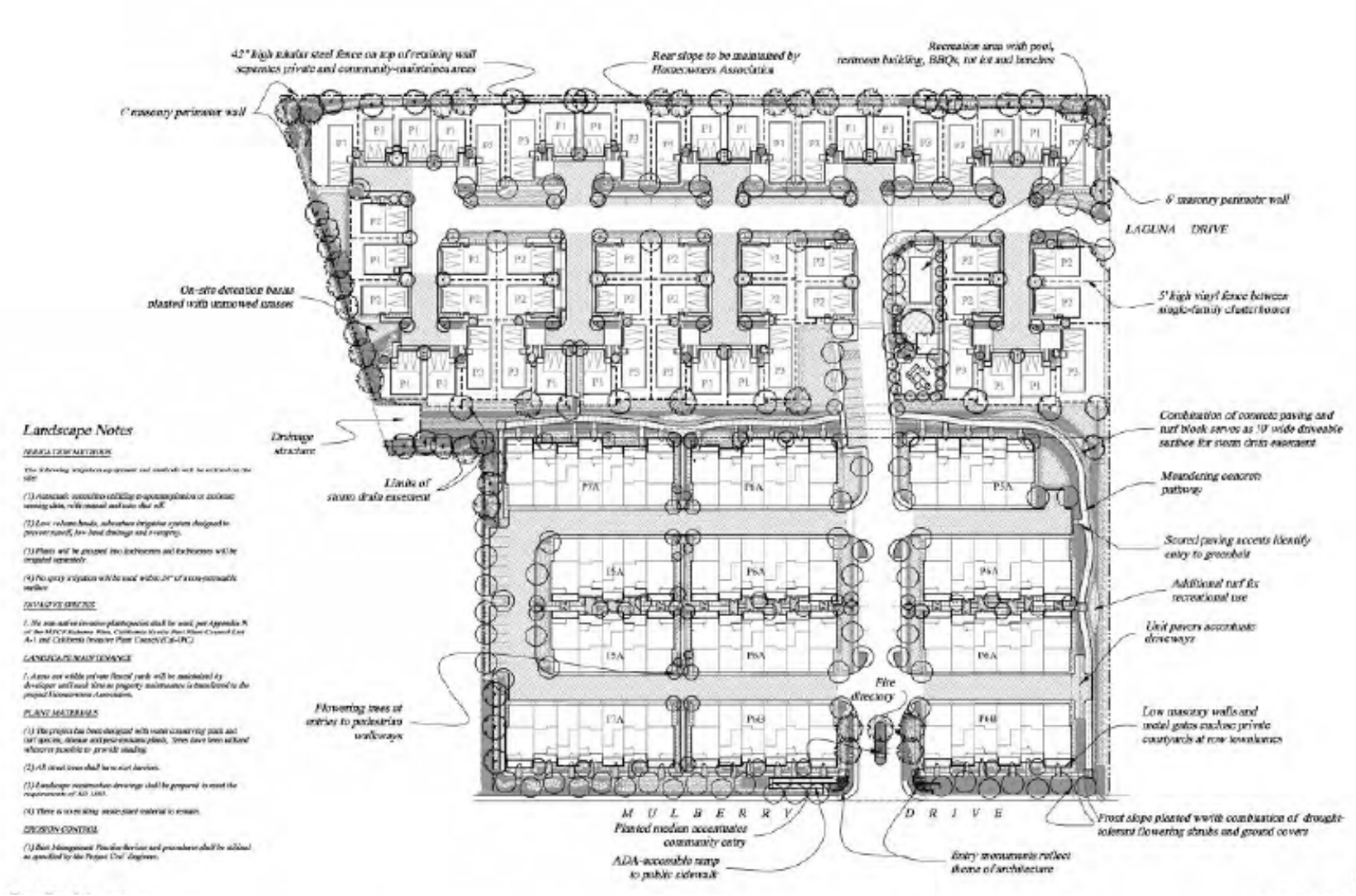
Figure 3. Sample Architectural Elevations

Sample Attached Residential Architectural Elevation

Sample Detached Residential Architectural Elevations

Note: *Please see Chapter 3 of the Specific Plan for plan layouts and more architectural elevations. The Specific Plan is included as Appendix A of this document.*

Figure 4. Landscape Concept



d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? Less than Significant Impact

The proposed project will incorporate lighting into the project design to the extent necessary for safety and security, and to complement architectural character. A lighting plan will be prepared for the project and submitted to the Planning Department for review and approval.

Lighting requirements are guided by standards set by the City of San Marcos, which requires downward-directed low-pressure sodium vapor lighting, with the exception of specialized streetscape lighting or architectural detail lighting. The proposed project would be designed to adhere to these standards.

Proposed roofing and building finishes would not be of a kind that would result in glare. As detailed in Section 3.2.8 of the Specific Plan, roofing materials will consist of low profile concrete tiles, or concrete shake tiles. Building exteriors will include a light stucco finish and wood trim. Therefore, impacts are less than significant.

II. AGRICULTURE AND FORESTRY RESOURCES

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? No Impact

The project site does not fall under areas mapped as prime farmland, unique farmland or farmland of statewide importance, as determined by the Farmland Mapping and Monitoring Program, as shown in the San Marcos General Plan (Figure 4-4, Agricultural Areas). The project site was formerly developed as a light industrial use. Therefore, the project would not result in the conversion of such lands and no impact is identified for this issue area.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? No Impact

The project site is not located within a Williamson Act contract area, as shown in the San Marcos General Plan (Figure 4-4, Agricultural Areas). Further, the project site is not zoned for agricultural use. The project site is identified as R-3-10 in the Zoning Ordinance. Under the proposed project, the site would be rezoned to Specific Plan Area. Therefore, no impact is identified for this issue area.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined in Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? No Impact

The proposed project is not located in an area that is zoned for forest land, timber land or for timber production. The project site is identified as R-3-10 in the Zoning Ordinance. Under the proposed project, the site would be rezoned to Specific Plan Area. Therefore, no impact is identified for this issue area.

d) Result in the loss of forest land or conversion of forest land to non-forest use? No Impact

The project site does not support forests, nor is there any forest land adjacent to the project site. The project site is currently developed and is proposed adjacent to existing or proposed

development. Therefore, the proposed project will not result in the loss of forest land or the conversion of forest land to non-forest use. No impact is identified for this issue area.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? No Impact

The project does not involve other changes in the existing environment which, due to their location or nature could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. The project site does not support any agricultural or timber uses, nor is it adjacent to such uses. Therefore, no impact is identified for this issue area.

III. AIR QUALITY

An air conformity analysis was prepared for the project by Scientific Resources Associates (2014a) and is included as **Appendix B.**

a) Conflict with or obstruct implementation of the applicable air quality plan? Less Than Significant Impact

Projects that are consistent with existing General Plan documents, which are used to develop air emissions budgets for the purpose of air quality planning and attainment demonstrations, would be consistent with the San Diego Air Basin's (SDAB) air quality plans, including the Regional Air Quality Strategy (RAQS) and the State Implementation Plan (SIP). Both of these air quality plans contain strategies for the region to attain and maintain the ambient air quality standards. Provided a project proposes the same or less development as accounted for in the General Plan document, and provided the project is in compliance with applicable Rules and Regulations adopted by the San Diego Air Pollution Control District (SDAPCD) through their air quality planning process, the project would not conflict with or obstruct implementation of the RAQS or SIP.

The project involves construction of 55 single-family detached condominium homes and 71 attached multi-family condominium homes. The project involves a General Plan Amendment that would reduce the approved density of the site from MDR2 (15.1 – 20.0 du/acre) to MDR1 (12.1 – 15.0 du/acre), which would result in a reduction in density. Because the project is proposing less dense development than the approved General Plan, the project would not conflict with the assumptions included within the RAQS and SIP, and would not conflict with the applicable air quality plan. Impacts would be less than significant.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? Less Than Significant Impact

Table 2 shows the state and federal attainment status for criteria pollutants in the SDAB. As shown in Table 2, the SDAB is a nonattainment area for the state and federal O_3 standards, and for the state PM_{10} and $PM_{2.5}$ standards.

To determine whether a project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD.

Table 2. Attainment Status of Criteria Pollutants in San Diego Air Basin

Pollutant	State	Federal
1-hour Ozone (O_3)	Serious Nonattainment	Revoked June 2005
8-hour O_3	Nonattainment	Marginal Nonattainment
Particulate Matter–10 microns (PM_{10})	Nonattainment	Unclassified
Particulate Matter–2.5 microns ($PM_{2.5}$)	Nonattainment	Unclassified/Attainment
Carbon Monoxide (CO)	Attainment	Maintenance
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	N/A

Source: California Air Resources Board: http://www.arb.ca.gov/desig/adm/adm.htm. April 2013.

As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA). For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. Since SDAPCD does not have AQIA thresholds for emissions of VOCs, the use of the threshold for VOCs from the City of San Diego's Significance Thresholds (City of San Diego 2007) is appropriate. The screening thresholds are presented in **Table 3**.

Table 3. Screening-Level Criteria for Air Quality Impacts

Pollutant	Total Emissions		
Construction Emissions	**Lb. per Day**		
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	100		
Oxides of Nitrogen (NOx)	250		
Oxides of Sulfur (SOx)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	137		
Operational Emissions	**Lb. Per Hour**	**Lb. per Day**	**Tons per Year**
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	100	15
Oxides of Nitrogen (NOx)	25	250	40
Oxides of Sulfur (SOx)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	137	15

Construction Emissions

Construction activities, including soil disturbance dust emissions and combustion pollutants from on-site construction equipment and from off-site trucks hauling dirt, cement or building materials, will create a temporary addition of pollutants to the local airshed.

Table 4 presents the model results for the construction of the project. Construction projects within the City are required to implement fugitive dust control measures during grading, which includes watering the site a minimum of twice daily to control dust, as well as reducing speeds on unpaved surfaces to 15 mph or less, replacing ground cover in disturbed areas quickly, and reducing dust

during loading/unloading of dirt and other materials. Also, projects would utilize low-VOC paints that would not exceed 100 grams of VOC per liter for interior surface and 150 grams of VOC per liter for exterior surfaces, in accordance with the requirements of SDAPCD Rule 67.0 for architectural coatings. Thus, Table 4 presents an estimate of the maximum daily construction emissions, assuming that these construction project design features will be employed.

Table 4. Construction Emissions – Proposed Project

Construction Project/Phase	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Grading						
Fugitive Dust	-	-	-	-	2.46	1.30
Off-Road Diesel	6.78	79.05	50.84	0.06	3.80	3.50
Hauling Truck Trips	2.06	29.93	20.09	0.07	2.06	0.86
Worker Trips	0.08	0.09	0.99	0.002	0.17	0.04
Total	**8.92**	**109.07**	**71.92**	**0.13**	**8.49**	**5.70**
Significance Threshold	137	250	550	250	100	100
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Building Construction						
Building Construction Off-Road Diesel	3.66	30.03	18.74	0.03	2.12	1.99
Building Construction Vendor Trips	0.15	1.42	1.58	0.003	0.11	0.05
Building Construction Worker Trips	0.27	0.32	3.51	0.007	0.59	0.16
Total	**4.08**	**31.77**	**23.83**	**0.04**	**2.82**	**2.20**
Significance Threshold	137	250	550	250	100	100
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Paving						
Paving Off-Road Diesel	2.32	25.18	14.98	0.02	1.41	1.30
Paving On-Road Diesel	0.06	0.55	0.61	0.001	0.04	0.02
Paving Worker Trips	0.06	0.07	0.74	0.002	0.12	0.03
Total	**2.44**	**25.80**	**16.33**	**0.02**	**1.57**	**1.35**
Significance Threshold	137	250	550	250	100	100
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Architectural Coatings Use						
Architectural Coating Offgassing	26.08	-	-	-	-	-
Off-Road Diesel	0.41	2.57	1.90	0.003	0.22	0.22
Architectural Coatings Worker Trips	0.05	0.06	0.69	0.001	0.12	0.03
Total	**26.54**	**2.63**	**2.59**	**0.00**	**0.34**	**0.25**
Significance Threshold	137	250	550	250	100	100
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum Simultaneous Construction Emissions	**33.06**	**109.07**	**71.92**	**0.13**	**8.49**	**5.71**
Significance Threshold	137	250	550	250	100	100
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

As shown in Table 4, maximum daily emissions of all criteria pollutants would be below the significance thresholds for each criteria pollutant.

Operational Emissions

Operational impacts associated with the proposed project would include impacts associated with vehicular traffic, as well as area sources such as energy use, consumer products use, and architectural coatings use for maintenance purposes. Emissions associated with project operations

were estimated using the CalEEMod Model, based on the project's overall trip generation rate of 1,008 ADT (RBF Consulting 2014).

Table 5 provides a summary of the estimated operational emissions for the proposed project.

Table 5. Operational Emissions – Proposed Project

	VOC	NOx	CO	SO_x	PM_{10}	$PM_{2.5}$
Summer Day, Lbs/day						
Area Sources	7.91	0.12	10.55	0.001	0.23	0.22
Energy Use	0.06	0.56	0.24	0.003	0.04	0.04
Vehicular Emissions	3.76	8.28	38.43	0.08	5.75	1.61
TOTAL	**11.73**	**8.96**	**49.22**	**0.09**	**6.02**	**1.87**
Significance Screening Criteria	137	250	550	250	100	55
Above Screening Criteria?	*No*	*No*	*No*	*No*	*No*	*No*
Winter Day, Lbs/day						
Area Sources	7.91	0.12	10.55	0.001	0.23	0.22
Energy Use	0.06	0.56	0.24	0.003	0.04	0.04
Vehicular Emissions	4.02	8.79	40.46	0.08	5.75	1.61
TOTAL	**11.99**	**9.47**	**51.25**	**0.08**	**6.02**	**1.88**
Significance Screening Criteria	137	250	550	250	100	55
Above Screening Criteria?	*No*	*No*	*No*	*No*	*No*	*No*

Operational emissions for the project would be below the significance criteria for operations. Air quality impacts would therefore be less than significant.

CO Hot Spot Analysis

Projects that involve traffic impacts may have the potential for CO "hot spots" to occur (i.e., high concentrations of CO at intersections). The Traffic Impact Analysis Report (RBF Consulting 2014) indicated that project-related traffic would not result in a significant degradation in level of service or significant delay at any of the intersections within the study area. Therefore, no exceedances of the CO standard are predicted, and the project would not cause or contribute to a violation of this air quality standard.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? Less Than Significant Impact

The SDAB is a non-attainment area for the state and federal O_3 standards, and for the state PM_{10} and $PM_{2.5}$ standards. Evaluating whether the project could result in a cumulatively considerable impact on air quality relies on both the project's consistency with the RAQS and SIP, which address attainment of the O_3 standards, and the potential for the project to result in a cumulatively considerable impact due to particulate emissions.

As part of the RAQS and SIP planning process, the SDAPCD develops an emission inventory, based on projections from the San Diego Association of Governments (SANDAG), of growth in the region as

well as on information maintained by the SDAPCD on stationary source emissions within the SDAB. The SDAPCD then uses the emission inventory to conduct airshed modeling, which provides a demonstration that the SDAB will attain and maintain the O_3 standards. Provided a project's emissions are consistent with the projections within the RAQS and SIP, the project would not result in a cumulatively considerable impact on O_3 within the SDAB.

With regard to emissions of O_3 precursors NOx and VOCs during construction, the SIP includes emissions associated with construction in its emissions budget and therefore within its attainment demonstration. The O_3 precursor emissions associated with project construction are well below the screening level thresholds and are well within the construction emissions budget contained in the SIP, which includes a demonstration that the SDAB will attain and maintain the O_3 standards. Thus because the project will be consistent with the SIP and therefore consistent with the attainment demonstration for O_3 contained within the SIP, the project would not result in a cumulatively considerable impact that would cause or contribute to a violation of the O_3 standard.

Because the project would result in emissions below the significance thresholds for all nonattainment pollutants, the project would not result in additional emissions of O_3 precursors above that projected in the attainment demonstration for O_3. The project will therefore not result in a cumulatively considerable impact on O_3 levels within the SDAB.

No simultaneous major construction projects are anticipated within 100 meters of the project site. Furthermore, particulate emissions for both construction and operations are below the significance thresholds. Therefore, no cumulatively considerable PM_{10} impact would result from construction or operation of the project.

d) Expose sensitive receptors to substantial pollutant concentrations? Less Than Significant Impact

Toxic Air Contaminants

Sensitive receptors are defined as schools, hospitals, resident care facilities, or day-care centers, as well as residential receptors in the project vicinity. The threshold concerns whether the project could expose sensitive receptors to substantial pollutant concentrations, either of criteria pollutants, or of toxic air contaminants (TACs).

If a project has the potential to result in emissions of any TACs which result in a cancer risk of greater than 10 in 1 million or substantial non-cancer risk, the project would be deemed to have a potentially significant impact. Residential uses are not land uses that would emit substantial amounts of toxic air contaminants. The truck traffic that would be associated with the construction activities would be confined to on-site trips to redistribute excavated material and minor on-road trips to deliver construction materials. Toxic air contaminant impacts would be less than significant.

e) Create objectionable odors affecting a substantial number of people? Less Than Significant Impact

Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. These compounds would be emitted in various amounts and at various locations during construction. Odors are highest near the source and would quickly dissipate off-site; any odors associated with construction would be temporary. Due to the temporary nature of

construction odors and the anticipated dissipation of odors off-site, impacts during construction would be less than significant.

The project is a residential development and would not include land uses that would be sources of nuisance odors. Thus the potential for odor impacts associated with the project is less than significant.

IV. BIOLOGICAL RESOURCES

A biological resources letter report, a biological resources map, and a wetland delineation were prepared for the project by Everett Consulting. These documents are included as **Appendices C.1, and C.2, and C.3.**

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? No Impact

Sensitive species are defined here as species of rare, threatened, or endangered status, or depleted or declining species according to the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), California Native Plant Society (CNPS), the California Natural Diversity Database (CNDDB) record for the Rancho San Marcos 7.5 minute quadrangle, or species and plant communities specifically designated as covered or narrow endemic species or sensitive habitats under the draft Natural Community Conservation Plan (NCCP) for the City of San Marcos.

Based on background research and an initial site visit, the only sensitive species with potential to occur on the site were burrowing owl and federally threatened and state endangered thread-leaved brodiaea.

The burrowing owl is likely the most endangered bird species currently inhabiting San Diego County. Its distribution is extremely limited, with the largest local population occurring on North Island Naval Air Station in Coronado. The species has declined dramatically in the County in the last 20 years. This species is colonial, and highly is dependent on burrows created by ground squirrels. It is a conspicuous species, and could be readily detected by site surveys. No burrowing owls, and no signs of burrowing owls, were detected during the site survey or are considered likely to occur. No impacts to this species are anticipated as a result of site development.

Thread-leaved brodiaea is known to occur in San Marcos. Accordingly, a focused survey for this species was conducted in the Spring of 2013. No thread-leaved brodiaea were detected.

No sensitive, threatened, or endangered species of plants or animals were observed on the site or are considered likely to occur due to the absence of suitable habitats or soils. No impact is identified for this issue area.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? No Impact

Based upon the biological resources letter report (**Appendix C.1**) and biological mapping (**Appendix C.2**) prepared for the project, there are no riparian or sensitive natural communities on the project

site. The project site supports 10.01 acres of non-native grassland. The location of the offsite water and sewer pipe upgrades is within paved streets and would not impact any sensitive habitats. Therefore, no impact is identified for this issue area.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? No Impact

A wetland delineation was conducted for the project site and wetland delineation report is included as **Appendix C.3** of this document. The purpose of the delineation was to identify and delineate any areas on the property that may be subject to the jurisdiction of the U.S. Army Corps of Engineers (ACOE), pursuant to Section 404 of the Clean Water Act. In addition, areas that may qualify as wetlands under the jurisdiction of the California Department of Fish and Wildlife (CDFW) were also delineated.

Review of the USGS maps and wetland inventory maps did not identify any blue line streams or wetlands onsite or nearby. Topography on the USGS map (San Marcos Quadrangle) does not show any drainage onsite. The closest blue line stream flows parallel to the railroad tracks and south of Mission Road.

Six areas on the project site were evaluated for ACOE jurisdiction onsite.

Plot 1 (Sample Point 1) was collected within the basin at the northwestern end of the site. Normal circumstances do not occur onsite. Small willows growing out of larger root bases indicate vegetation in the basin is regularly mowed or removed with sediment in the basin. The basin appears to be manmade at the outfall of the storm drains. The location was primarily unvegetated with only 20 percent cover; however, the two dominant species, black willow and tall umbrella sedge were obligate and facultative wetland species, respectively. Soils onsite had a low chroma and depleted matrix that indicate a hydric soil. Despite the basin onsite there were no secondary indicators of hydrology. This site appears to be a detention basin created in an upland and would not be considered jurisdictional by the ACOE or CDFW.

Plot 2 (Sample Point 2) was collected in a low area at the southern end of the property that was not associated with the drainage channel. This low area may pond water for a slightly longer period than adjacent habitat due to a berm built immediately off-site. This low area is dominated by primarily nonnative species that are facultative wetland species including curly dock, rabbitfoot grass, Loosestrife, and spikerush. The soils onsite do not exhibit any hydric characteristics and there were no hydrology indicators. The clay soils onsite likely retain more water in this slightly lower area and allow these species to develop onsite. This location would not be considered jurisdictional by the ACOE or CDFW.

Plot 3 (Sample Point 3) was collected at the downstream end of the drainage through the middle of the site. There is a narrow (approximately 2.5 foot wide), shallow drainage channel in this location that discharges to the outlet culvert. Vegetation in this channel was primarily upland grasses such as wild oat and goose grass with some wild rye. Wild rye is often found in clay soils such as these that retain water for a longer period. No wetland hydrology, hydrophytic vegetation, or hydric soils were identified in this channel.

Plot 4 (Sample Point 4) was collected towards the middle of the site in a slightly lower portion of the channel. The vegetation onsite was mostly nonnative grasses with 50 percent of the dominant

species that were obligate, facultative wetland, or facultative species. However, since the plot did not exhibit hydric soils or hydrology, the area is not considered a wetland.

Plot 5 (Sample Point 5) was collected approximately 75 feet downstream of the storm drain in the center of the site. There is evidence of manipulation of the vegetation onsite. There are two large tree stumps and the bulrush in the channel was line-trimmed. However, the majority of the channel was dominated by ice plant with some bulrush extending through the ice plant. There was an organic layer on the sediment surface that had a low chroma; however, the soils below the layer were the same clay loam without hydric indicators. The channel exhibits a bed and bank, but no secondary indicators of hydrology. The organic layer is likely due to vegetation mowing. The lack of soils and hydrology indicators despite the vegetation manipulation indicate that this location is not a jurisdictional wetland under ACOE or CDFW in the current condition.

Plot 6 (Sample Point 6) was collected in front of the outfall of the storm drain. There were two dominant plants - ice plant (upland), and Bermuda grass, a facultative species. Cattails were also observed onsite, but were only a minor component. The prevalence indicator was 4.1 indicating that hydrophytic vegetation was not present. The soils were very dark exhibiting a depleted matrix associated with hydric soils and the presence of coarse sand within the clay loam indicates sediment deposits that likely drop out of the flow quickly after leaving the storm drain. Hydrology indicators of drainage patterns in wetlands and sediment deposits were present. This location is not an ACOE wetland because it lacks hydrophytic vegetation. It is also not a CDFW wetland.

In conclusion, the drainage ditch and basin onsite appear to be manmade or developed due to storm water discharges on the site that were not naturally occurring. It is likely that only high flow events during a storm result in surface water onsite. Clay soils onsite retain water and allow more facultative invasive species to grow onsite. In addition, there is no evidence of a discharge of this flow into a natural water course. The storm drain at the southern end of the site may be piped under development and ultimately discharge to the blue-line stream south of Mission Road; however, this is unknown. The drainage onsite does not provide aquatic habitat or useful wildlife habitat associated with most wetlands. Therefore, no impacts to federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) are identified for the project.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? No Impact

The project site is in an urbanized portion of the city. The project site and vicinity is not identified as being within a Wildlife Corridor per Figure 4-2 of the City of San Marcos General Plan. Therefore, the project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site and no impact is identified.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? No Impact

The Open Space and Conservation Element of the City's General Plan includes policies related to the protection of biological resources. The applicable policies, as well as the project's consistency with the policies, is presented below:

Policy COS-1.1: Support the protection of biological resources through the establishment, restoration, and conservation of high quality habitat areas.

The projet site would not be characterized as a high quality habitat area. The project site supports nonnative grassland and is surrounded by development. Thus the site is not ideal for habitat conservation. The project does not conflict with this policy.

Policy COS-1-2: Ensure that new development, including Capital Improvement Projects, maintain the biotic habitat value of riparian areas, oak woodlands, habitat linkages, and other sensitive habitats.

The project site does not support any sensitive habitats. A wetland delineation was prepared for the project and concluded that the site does not suppport any riparian areas, oak woodlands, habitat linkages or other sensitive habitats. The project does not conflict with this policy.

In conclusion, the project would not conflict with local policies and no impact is identified for this issue area.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? <u>No Impact</u>

The project site is currently undeveloped. The site is not located within a Focused Planning Area or Biological Core and Linkage Area of the Multiple Habitat Conservation Program (MHCP). The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact is identified for this issue area.

V. CULTURAL RESOURCES

A Cultural Resources Report was prepared for the project by ASM Affiliates (2014) and is included in **Appendix D**.

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? <u>Less Than Significant Impact</u>

A cultural resources report has been prepared for the project site by ASM Affiliates (March 2014) and is included in Appendix D. The report presents the results of a cultural and historical resources inventory conducted within the Area of Potential Effect (APE) for the proposed project. Site records on file at the South Coastal Information Center (SCIC), San Diego State University, indicate 55 previous archaeological surveys have been conducted within a one-mile search radius of the proposed project. Only the southeast corner of the project site has previously been evaluated for cultural resources.

The report concluded that no cultural resources had been previously recorded within the project site, and no new resources were recorded during the survey. A total of 18 cultural resources have been located within a one-mile search radius including four historic structures.

Since no historic resources have been previously recorded on the project site and the pedestrian survey conducted by ASM did not identify any historical resources on the site, impacts are determined to be less than significant.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? Less Than Significant with Mitigation Incorporated

Based upon the cultural resources report prepared for the project (ASM Affiliates 2014), no archeological resources are known to occur on the project site. ASM's research included a records research and site reconnaissance.

Site records on file at the SCIC indicated 55 previous cultural resource surveys have been conducted within a one-mile radius of the proposed project. None of the previous surveys identified or recorded archaeological resources within the current project boundary. Additionally, the pedestrian survey conducted by ASM did not identify any cultural resources on the site. A Sacred Lands File Search was conducted by the Native American Heritage Commission (NAHC) and did not identify any sacred sites in the project area**.**

Of the 55 previous archaeological surveys, 18 previously recorded resources were identified within a one-mile radius of the project site, including 12 prehistoric sites, two prehistoric isolates and four historic resources. Only one site, CA-SDI-749, was located within the vicinity of the project site (within 100 meters).

CA-SDI-749 is an artifact scatter containing shell and La Jollan period tools. The artifacts recorded included a mano, hammerstone, and lithic debitage. The site was recorded as partially disturbed by modern development.

Native American Letters and SB-18 Consultation

Letters were also sent to the Native American contacts on March 4, 2014 by ASM Affiliates as part of the research for preparing the cultural resources report. The City of San Marcos also sent letters to local Tribes as part of the SB-18 consultation process.

Rose Duro, the Rincon Cultural Committee Chairman, responded on March 13, 2014, that the Rincon Band of Luiseño Indians would like to remain informed of any and all updates and changes to the Project. Tuba Ebru Ozdil, Planning Specialist from the Pechanga Cultural Resources Department, responded on March 25, 2014 that the tribe is concerned that the Project may impact cultural resources. The tribe requests that they be notified once the Project begins the entitlement process, that they receive copies of all applicable archaeological reports, site records, proposed grading plans, and environmental documents, that government-to-government consultation with the City of San Marcos take place, and that monitoring by a qualified archaeologist and a professional Pechanga Tribe monitor be required during earthmoving activities.

In addition, the City met directly with Tribal representatives from the San Luis Rey and Pechanga. During that meetings the Tribes shared confidential information regarding the project site and surrounding and requested that a Native American monitor be included during project construction. This requirement has been included as a mitigation measure for the project and will be required as a condition of project approval.

While no resources were identified on the project site, the site's location near CA-SDI-749 warrants monitoring by a qualified archaeological monitor and a Native American monitor to prevent accidental disturbance of any intact cultural deposits that were not identified on the project site (**Impact CR-1**). Input from local Tribes also requested monitoring.

This requirement, as well as pre-grading coordination and execution of a Cultural Resources Treatment and Monitoring Agreement, is included as mitigation measures **MM-CR-1 through MM-CR-8**. Implementation of MM-CR-1 through MM-CR-8 shall be required as a condition of project approval and will reduce potential impacts to below a level of significance.

MM-CR-1 An archeological monitor and a Luiseño Native American monitor shall be present during all earth moving and grading activities to assure that any potential cultural resources, including tribal, found during project grading be protected.

MM CR-2 Prior to beginning project construction, the Project Applicant shall retain a San Diego County qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. Any newly discovered cultural resource deposits shall be subject to cultural resources evaluation, which shall include archaeological documentation, analysis and report generation and take into account tribal customs and traditions.

MM-CR-3 At least 30 days prior to beginning project construction, the Project Applicant/Landowner shall enter into a Cultural Resource Treatment and Monitoring Agreement (also known as a pre-excavation agreement) with a Luiseño Tribe. The Agreement shall address the treatment of known cultural resources, the designation, responsibilities, and participation of professional Native American Tribal monitors during grading, excavation and ground disturbing activities; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains discovered on site.

MM-CR-4 Prior to beginning project construction, the Project Archaeologist shall file a pre-grading report with the City to document the proposed methodology for grading activity observation, which will be determined in consultation with the contracted Luiseño Tribe referenced in MM-CR-3. Said methodology shall include the requirement for a qualified archaeological monitor to be present and to have the authority to stop and redirect grading activities. In accordance with the agreement required in MM-CR-3, the archaeological monitor's authority to stop and redirect grading will be exercised in consultation the Luiseño Native American monitor in order to evaluate the significance of any archaeological resources discovered on the property. Tribal and archaeological monitors shall be allowed to monitor all grading, excavation, and groundbreaking activities, and shall also have the authority to stop and redirect grading activities. The Luiseño Native American monitor shall be a participant in any pre-construction meetings that address archaeological issues.

MM-CR-5 The landowner shall relinquish ownership of all cultural resources collected during the grading monitoring program and, if appropriate, from any previous archaeological studies or excavations on the project site to the appropriate Tribe for proper treatment and disposition per the Cultural Resources Treatment and

Monitoring Agreement referenced in MM-CR-3. Such treatment may include curation at a facility that meets the criteria contained in 36 C.F.R. Part 79, including those facilities operated and maintained by a Luiseño Tribe or if required by the appropriate Tribe, reburial on-site. All cultural materials that are deemed by the Tribe to be associated with burial and/or funerary goods will be repatriated to the Most Likely Descendant as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98.

~~In the event that curation of cultural resources is required, curation shall be conducted by an approved facility and the curation shall be guided by California State Historic Resource Commissions Guidelines for the Curation of Archaeological Collections. The City of San Marcos shall provide the developer final curation language and guidance on the project grading plans prior to issuance of the grading permit, if applicable, during project construction.~~

MM-CR-6 All sacred sites, should they be encountered within the project area, shall be avoided and preserved as the preferred mitigation, if feasible.

MM-CR-7 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. Suspected Native American remains shall be examined in the field and the location of the find shall be kept secure. ~~kept in a secure location at the site.~~ If the San Diego County Coroner determines the remains to be Native American, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. The NAHC must then immediately notify the "most likely descendant(s)" of the discovery. The most likely descendants(s) shall then make recommendations within 48 hours, and engage in consultation concerning treatment of remains as provided in Public Resources Code 5097.98.

MM-CR-8 If inadvertent discoveries of subsurface archaeological/cultural resources, not including human remains or associated burial goods which is addressed in MM-CR-7, are discovered during grading, the Developer, the project archaeologist, and the Luiseño Tribe under agreement with the landowner described in MM-CR-3 shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. Pursuant to California Public Resources Code Section 21083.2(b) avoidance is the preferred method of preservation for archaeological resources. If the Developer, the project archaeologist and the Tribe cannot agree on the significance of mitigation for such resources, these issues will be presented to the Planning Director for decision. The Planning Director shall make a determination based upon the provisions of the California Environmental Quality Act with respect to archaeological resources and shall take into account the religious beliefs, customs, and practices of the Tribe. Notwithstanding any other rights available under law, the decision of the Planning Director shall be appealable to the Planning Commission and/or City Council.

MM-CR-9 Fill material brought onto the project site shall be clean of cultural resource material. The fill material shall be analyzed and confirmed by an archaeologist and/or Luiseño Native American monitor.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? Less Than Significant Impact

The project site is flat and does not support any unique geologic features. The project site is located in an area geologically mapped to be underlain mostly by Jurassic to Cretaceous age metavolcanic and metasedimentary bedrock and Quaternary age alluvium. Due to the limited availability of fossil-producing geologic formations, impacts are considered less than significant

d) Disturb any human remains, including those interred outside of formal cemeteries? Less Than Significant With Mitigation Incorporated

The cultural resource assessment prepared by ASM Affiliates (2014) did not indicate the likelihood of human remains on the site. Additionally, existing regulations, through California Health and Safety Code Section 7050.5 state that if human remains are discovered during project construction, no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the San Diego County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within a reasonable timeframe. Subsequently, the Native American Heritage Commission shall identify the "most likely descendant." The Most Likely Descendant shall then make recommendations, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98. So, while the cultural resources assessment concluded that there is no evidence of human remains on the project site, a Native American monitor shall be present during the earth moving grading activities to assure that any resources found during project grading would be protected as directed by the MLD (**MM-CR-1**). Therefore, impacts are less than significant with incorporation of mitigation measure MM-CR-1.

VI. GEOLOGY AND SOILS

A preliminary geotechnical report was prepared for the project site by GeoTek (2013) and is included as **Appendix E** of this document.

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. No Impact

The project site is located within a seismically active region, as is all of southern California. However, the project site is not adjacent to any known active faults. The project site is not located on a fault, as delineated by the most recent Alquist-Priolo Earthquake Fault Zoning Map (Department of Conservation 2008). The closest faults are the Rose Canyon Fault (12 miles

southwest of the project), the Elsinore Fault (20 miles to the northeast), and the Coronado Banks fault (27 miles to the southwest). Therefore, no impact is identified for this issue area.

ii) Strong seismic ground shaking? Less Than Significant Impact

The proposed project is located in seismically active southern California and is considered likely to be subjected to strong ground motion from regional seismic activity. As identified in Section VI.a.i, the nearest identified potentially active fault is located approximately 12 miles from the project area. All structures on the site would be designed in accordance with seismic parameters of the California Building Code (2007). Therefore, the impact for this issue area would be considered less than significant.

iii) Seismic-related ground failure, including liquefaction? No Impact

Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading. Liquefaction and related phenomena have been responsible for substantial structural damage in historical earthquakes, and are a design concern under certain conditions.

Liquefaction occurs in saturated soils, in which the space between individual particles is completely filled with water. This pore water exerts a pressure on the soil particle that influences how tightly the particles themselves are pressed together.

Prior to an earthquake, pore water pressure is typically low; however, earthquake motion can cause the pore water pressure to increase to the point where the soil particles can readily move with respect to each other. When liquefaction occurs, the strength of the soil decreases and the ability of a soil deposit to support structural loads are reduced.

Due to the relatively shallow bedrock and absence of groundwater at the project site, the liquefaction potential and seismic settlement potential on this site is considered negligible. Therefore, no impact is identified.

iv) Landslides? No Impact

The project site is relatively flat and is located in a flat part of the city. Evidence of ancient landslides or slope instabilities at the project site was not observed during the geotechnical investigation (GeoTek 2013). Thus there is not a potential for the exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. Therefore, no impact is identified for this issue area.

b) Result in substantial soil erosion or the loss of topsoil? No Impact

The project site is essentially flat and currently undeveloped. After development, the project site will support residential uses. Due to the fact that the site is flat and the project will not leave exposed areas of bare soil, the project will not result in substantial soil erosion or loss of topsoil and no impact is identified.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? Less than Significant Impact

The project site is located in an area geologically mapped to be underlain mostly by Jurassic to Cretaceous age metavolcanic and metasedimentary bedrock and Quaternary age alluvium. The project site area is locally underlain by undocumented fill materials, alluvium, and metavolcanic bedrock at depth. Undocumented fill soils were locally observed to be scattered in isolated areas across the site. Thicker zones of fill were noted in association with the existing site access road and storm drain improvement area in the northeast corner of the site. Per conversation with the property owner in the field during GeoTek's field exploration, an area drain system traverses the central portion of the site as well as from the northeast corner to the central southern portion of the site. Where not associated with roadways and storm drain improvements, the fill did not appear to be more than 1 to 2 feet in maximum thickness. Other areas of undocumented fill (unmapped) may also be present on the site, as a result of existing and past site activities.
In general, undocumented fill soils are not considered suitable for support of structural site improvements, but may be re-used as engineered fill if properly placed. Adherence to the recommendations within the Geotechnical report, specifically related to remedial grading and undocumented fill (listed in Table 1 of the report) would reduce any potential concerns related to building stability on the project site.

Colluvial/alluvial soils were observed to cover most of the property. Based on the results of the laboratory testing performed on samples of this material, the onsite alluvial materials indicated a low to medium expansion potential when tested and classified in accordance with ASTM D 4829. Some materials with high expansion potential could be encountered. However, it is anticipated that most of the onsite materials will have a "medium" expansion potential. Compliance with the recommendations within the Geotechnical report related to foundation design, specifically the use of post-tension foundations, would reduce the risk from soil expansion.

As discussed previously, due to the relatively shallow bedrock and absence of groundwater at the site, the liquefaction potential and seismic settlement potential on this site is considered negligible.

Through compliance with design recommendations included in the Geotechnical report (GeoTek 2013), development of the project would not be subject to instability that would result in on- or off-site landslide, lateral spread, subsidence, liquefaction, or collapse. Impacts for this issue are less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? <u>Less Than Significant Impact</u>

The preliminary geotechnical study for the project (GeoTek 2013) concluded that the upper soils exhibit a low to medium expansion potential when tested and classified in accordance with ASTM D 4829. However, it is anticipated that most of the onsite materials will have a "medium" expansion potential. Compliance with the recommendations within the Geotechnical report related to foundation design, specifically the use of post-tension foundations, would reduce the risk from soil expansion. Therefore, expansion of soils on the site would not result in substantial risks to life or property and impacts are less than significant.

e) Have soils capable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? <u>No Impact</u>

The project does not propose any septic tanks or alternative wastewater disposal systems. Therefore, no impact is identified for this issue area.

VII. GREENHOUSE GAS EMISSIONS

A global climate change assessment was prepared for the project by Scientific Resources Associated (2014b). The complete report is included as **Appendix F** of this document.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? Less Than Significant Impact

Existing Greenhouse Gas (GHG) Emissions

GHG emissions associated with the project were estimated separately for four categories of emissions: (1) construction; (2) energy use, including electricity and natural gas usage; (3) water consumption; and (4) transportation. The analysis includes a baseline estimate assuming Title 24-compliant buildings, which is considered business as usual for the proposed project. Emissions were estimated based on emission factors from the California Climate Action Registry General Reporting Protocol (CCAP 2008). This inventory presents emissions based on "business as usual" assumptions.

Construction GHG Emissions

Construction GHG emissions include emissions from heavy construction equipment, truck traffic, and worker trips. Emissions were calculated based on the CalEEMod Model (ENVIRON 2013). Total GHG emissions associated with construction are estimated at 883 metric tons of CO_2e. To evaluate construction projects' contributions to overall annual GHG emissions, the SCAQMD recommends in their interim guidance for evaluating GHGs under CEQA (SCAQMD 2008). For construction emissions, the interim guidance recommends that the emissions be amortized over 30 years and added to operational emissions, as appropriate. Amortized over 30 years, construction would contribute 29 metric tons per year of CO_2 emissions.

Operational GHG Emissions

The Mulberry Specific Plan proposes to construct 55 single-family detached condominium homes on the western portion of the project site and 71 attached multi-family condominium homes on the eastern portion of the project site. The project also includes parking, a private recreational area, and roadways. Total electricity, natural gas, and water usage rates for the residences and commercial development under "business as usual" conditions were estimated as discussed in the sections below.

Energy Use Emissions. Energy use generates GHG through emissions from power plants that generate electricity as well as emissions from natural gas usage at the project itself. Business as usual electricity use was estimated based on construction of the proposed project to meet the requirements of Title 24 as of 2005. Based on the latest guidelines and baseline emission calculations for energy efficiency, "business as usual" is considered to be the equivalent of Title 24 as of 2005 because the ARB's baseline inventory and its definition of business as usual is based on compliance with Title 24 as of 2005. The ARB prepared its inventory to evaluate the required reduction from "business as usual", which is defined as the baseline with no measures implemented to reduce emissions of GHGs. For building standards, the goal of reducing emissions below business as usual within the ARB's Scoping Plan is based on Title 24 as of the ARB's inventory. Thus, the baseline used in this analysis is consistent with the ARB's analysis and goals. The use of Title 24 as of 2005 is consistent with the Scoping Plan.

Natural gas use was also estimated based on construction of the proposed project to meet the requirements of Title 24 as of 2005.

Residential electricity use was estimated based on average performance for southern California residences, according to the California Statewide Residential Appliance Saturation Survey (CEC 2009). The energy use figures in this report represent current state-wide average uses, including those that are compliant with 2005 Title 24 standards. The California Statewide Residential Appliance Saturation Survey provided estimated energy use of 4,561 kWh annually for townhomes within the state of California. In the California Statewide Residential Appliance Saturation Survey (CEC 2009), natural gas usage rates were reported as 247 therms per year.

GHG emissions were then calculated based on the emission factors in the California Climate Action Protocol (CCAP 2009) to estimate emissions of GHGs per kWh or MMBTU used per year.

Water. Water usage was estimated based on the CalEEMod Model. The model assumes that the residential portion of the development would utilize 8.2 million gallons annually for indoor uses and 5.1 million gallons annually for outdoor uses. The California Energy Commission (2006b) estimates that in Southern California, water usage will have an embodied energy of 13,022 kWh per million gallons.

Vehicle Emissions. Based on the traffic impact analysis (RBF Consulting 2014), the estimated total number of trips for the project is 1,008. It was assumed that the average trip length would be 5.8 miles, based on the SANDAG average trip length (SANDAG 2012).

Solid Waste. Solid waste generation rates were estimated based on the CalEEMod Model. The CalEEMod Model calculated a solid waste generation rate of 97 tons per year for the project. Solid waste handling GHG emissions were calculated based on the CalEEMod Model.

GHG emissions under "business as usual" conditions are summarized in **Table 7.** As shown in Table 7, total CO_2e emissions would be 1,377 metric tons per year.

Table 7. Summary of Estimated Operational GHG Emission – Business as Usual Scenario

Emission Source	Annual Emissions (Metric tons/year)			
	CO_2	**CH_4**	**N_2O**	**CO_2e**
Operational Emissions				
Electricity Use Emissions	189	0.0079	0.0021	190
Natural Gas Use Emissions	165	0.0184	0.0003	166
Water Consumption Emissions	35	0.0015	0.0004	35
Solid Waste Handling	20	1.1640	-	44
Vehicle Emissions	901	0.0065	0.0378	913
Amortized Construction Emissions	29	-	-	29
Total	**1,339**	**1.1983**	**0.0406**	**1,377**
Global Warming Potential Factor	**1**	**21**	**310**	
CO_2 Equivalent Emissions	1,339	25	13	1,377
TOTAL CO_2 Equivalent Emissions	**1,377**			

A significance threshold of 28.35 percent from "business as usual" levels is considered to demonstrate that a project would be consistent with the goals of AB 32. If the project can

demonstrate that it would meet these goals, its greenhouse gas emissions, emitted either directly or indirectly, would not have a significant impact on the environment.

Not all of the GHG-reducing project design features identified in the project description are quantifiable due to scientific and methodological limitations regarding GHG savings. The CEC (Architectural Energy Corporation 2007) estimates that implementation of the Title 24 standards as of 2008 will result in reductions in electricity use of 19.7 percent from business as usual for multi-family residential dwellings. The CEC also estimates that implementation of the Title 24 standards as of 2008 will result in reductions in natural gas use of 7.0 percent from business as usual for multi-family residential dwelling. Implementation of Title 24 as of 2013 will reduce energy demand by an additional 15 percent for all structures.

It was assumed that the project would include water conservation measures within the design, including the use of low-flow fixtures and drought-resistant landscaping. These measures were taken into account within the CalEEMod Model, and were assumed to reduce water usage by 20% for indoor uses and 6.1% for outdoor uses.

Implementation of the Renewable Portfolio Standards (RPS) will affect indirect GHG emissions associated with electricity use for the project because electricity will be purchased from San Diego Gas and Electric. According to the San Diego County Greenhouse Gas Inventory, implementation of the 33 percent RPS mandate, as established by SB 107, would reduce GHG emissions by 27 percent from 2005 levels; credit was taken for these GHG savings in this analysis.

It was also assumed that recycling programs implemented within the City would reduce solid waste generation by 10%. This reduction would result in an accompanying reduction in GHG emissions for solid waste handling of 10%.

Implementation of the new Federal CAFE standards will achieve reductions that are equivalent to those proposed in AB 1493, the Pavley bill. Emissions were calculated based on the 2020 emission factors from the EMFAC2011 model (ARB 2011), with credit for the Pavley standards and the Low Carbon Fuel Standard.

The results of the GHG inventory for emissions with implementation of GHG reduction measures are presented in **Table 8**.

Table 8. Summary of Estimated Operational GHG Emission With GHG Reduction Measures Scenario

Emission Source	Annual Emissions (Metric tons/year)			
	CO_2	CH_4	N_2O	CO_2e
Operational Emissions				
Electricity Use Emissions	94	0.0039	0.0011	94
Natural Gas Use Emissions	131	0.0145	0.0002	131
Water Consumption Emissions	21	0.0009	0.0002	21
Solid Waste Handling	18	1.0476	-	40
Vehicle Emissions	660	0.0046	0.0302	670
Amortized Construction Emissions	29	-	-	29
Total	**953**	**1.0715**	**0.0317**	**985**
Global Warming Potential Factor	**1**	**21**	**310**	

CO_2 Equivalent Emissions	955	22	10	989
TOTAL CO_2 Equivalent Emissions	**985**			
Business as Usual CO_2 Equivalent Emissions	**1,377**			
Percent Reduction	**28.47%**			

As shown in Table 8, with implementation of the project design features described above, project emissions would total 985 metric tons per year and the project will meet the significance threshold by reducing operational GHG emissions by 28.47 percent from business as usual. Because the project would reduce emissions by more than the significance threshold of 28.35 percent, the project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? Less Than Significant Impact

The project would not conflict with implementation of the plans and programs proposed in the conservation element of the City of San Marcos General Plan Update, and would generate GHG emissions of approximately 2.74 metric tons per service population, which is below the level of 4.9 metric tons per service population used to evaluate impacts in the EIR for the General Plan Update. Accordingly, the project would not result in a significant impact due to GHG emissions.

VII. HAZARDS AND HAZARDOUS MATERIALS

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials? Less Than Significant Impact

Hazardous materials include solids, liquids, or gaseous materials that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, could pose a threat to human health or the environment. Hazards include the risks associated with potential explosions, fires, or release of hazardous substances in the event of an accident or natural disaster, which may cause or contribute to an increase in mortality or serious illness, or pose substantial harm to human health or the environment.

The proposed project would involve the transport of fuels, lubricants, and various other liquids needed for operation of construction equipment at the site and would be transported to the construction site on an as-needed basis by equipment service trucks. In addition, workers would commute to the project site via private vehicles, and would operate construction vehicles/equipment on both public and private streets. Materials hazardous to humans, wildlife, and sensitive environments would also be present during project construction of the pipeline installation. These materials include diesel fuel, gasoline, equipment fluids, concrete, cleaning solutions and solvents, lubricant oils, adhesives, human waste, and chemical toilets. The potential exists for direct impacts to human health and biological resources from accidental spills of small amounts of hazardous materials from construction equipment during construction of the pipeline; however, the proposed project would be required to comply with Federal, State, and City Municipal Code regulations which regulate and control those materials handled on-site. Compliance with these restrictions and laws ensures that potentially significant impacts would not occur. Therefore, a less than significant impact is identified.

b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment? Less Than Significant Impact

The only hazardous materials anticipated for transport or disposal associated with the project are routinely used household products such as cleaners, paint, solvents, motor oil/automotive products, batteries and garden maintenance products. The use, handling and disposal of these products are addressed by household hazardous waste programs that are part of the Integrated Waste Management Plan of the County of San Diego. Impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? No Impact

The closest school is Mission Hills High School, which is located approximately 0.4 mile east of the project site. There is an existing daycare to the south of the project site. The project does not propose any uses that would emit hazardous emission or handle hazardous or acutely hazardous materials, substances, or waste. The project is a residential development and such development would not be characterized as emitting or handling hazardous materials. Therefore, no impact is identified for this issue area.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? Less Than Significant Impact

A Phase 1 Environmental Site Assessment was prepared for the site by TetraTech in 2013. TetraTech did not identify any onsite or off-site recognized environmental conditions (REC) related to the project. The analysis included a review of historical aerial photographs. Based upon the aerial photographs, the site was agricultural land through the 1963 air photo. In the 1974 aerial photograph, the site appears to have turned fallow. Based on the historical use of the target property and surrounding areas as agricultural land, it is possible that environmentally persistent pesticides have been applied to crops grown on or around the target property. However, the normal use and application of agricultural chemicals generally does not trigger enforcement actions, assessments by regulatory agencies, or the recommendation for further assessment of the target property, unless there is evidence which indicates that misuse, dumping or improper storage of chemicals is present or has occurred. There are no indications of these types of activities, or evidence of on-site agricultural chemical mixing, large quantity storage, or materials processing located on the target property.

The California Department of Toxic Substances Control maintains an online database, EnviroStor, that allows for search of permitted facilities and environmental cleanup activities on a specific location. A review of EnviroStor did not reveal any cleanup sites, permitted sites, or other related sites on the project site.

The closest record in the database entries to the project site are associated with 7-11 Food Store, Hollandia Dairy (three listings), Buena Vista Equipment Company and Camp Vista. More detail on each of these listing and the current status is provided below:

Location	Description	Status
7-Eleven Food Store #18977 578 E. Mission Road San Marcos	Leaking Underground Storage Tank Cleanup Site	Completed – Case Closed

Location	Description	Status
Hollandia Dairy 622 E Mission Road San Marcos	Leaking Underground Storage Tank Cleanup Site	Completed – Case Closed
Hollandia Dairy 622 E Mission Road San Marcos	Leaking Underground Storage Tank Cleanup Site	Completed – Case Closed
Hollandia Dairy 622 E Mission Road San Marcos	Cleanup Program Site	Completed – Case Closed
Buena Vista Equipment Co. 555 E. Mission Road San Marcos	Cleanup Program Site	Completed – Case Closed
Camp Vista 1237 Green Oak Road San Diego County	Potential contaminant of concern – unexploded ordinance	Case status – inactive Department of Toxic Substance Control (DTSC) sent letter in 2007 concurring that no further action was required.

As shown in the table above, listings in the project area have a status of case closed or inactive and would not impact the project site. In summary, the project site is not included on a list of hazardous materials sites, and, as a result would not create a significant hazard for people residing or working in the area. Thus impacts are less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? No Impact

The proposed project is not located within an airport land use plan area, nor is it within two miles of a public airport or public use airport. The nearest is the McClellan-Palomar Airport in Carlsbad, which is located approximately 7 miles west of the project area. Therefore, no impact is identified for this issue area.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? No Impact

The proposed project is not located within the vicinity of a private airstrip. Therefore, the project does not have the potential to result in a safety hazard for people residing or working in the project area. No impact is identified for this issue area.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? Less than Significant Impact

The project does not propose any development that would impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan. Construction of the project would not result in any complete road closures. Offsite improvements associated with water and sewer pipeline upgrades may require partial lane closures, but not a complete road closure. The San Marcos Fire Department has reviewed the project and has not raised any concerns on this issue. Therefore, impacts are less than significant.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? Less Than Significant Impact

A short-form Fire Protection Plan was prepared for the project and was reviewed and approved by the City's Fire Marshal. The complete plan is included as **Appendix K**. The Fire Protection Plan addresses water supply, fire access roads, fire protection systems, fire protection equipment, defensible space, vegetation management, and fire behavior computer modeling.

The City typically requires a 150-foot fuel management zone to be established and maintained around each structure per the Consolidated Fire Code, unless adjacent to existing development. The site is bound on all site by developed property, with residences to the north and west and commercial and light industrial properties to the south and east. On the southern property line, the light industrial property has not used its full site leaving one an area adjacent to the development in natural vegetation. This area has been and will continue to be cleared by that property owner annually. Since the project site is not located next to wildland areas and the project will be required to implement the fire protection plan, as approved by the Fire Marshall, impacts are less than significant.

VIII. HYDROLOGY AND WATER QUALITY

A water quality improvement plan and a hydrology report were prepared for the project. These documents are included as **Appendix L** and **Appendix M** of this document.

a) Violate any water quality standards or waste discharge requirements? Less than Significant Impact

The project will comply with all water quality standards and waste discharge requirements. Since the project includes disturbance to more than an acre, a Construction General Permit from SWRCB will be require prior to the issuance of a grading permit. A Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented in accordance with Risk Level 2. The SWPPP will identify Best Management Practices (BMPs) to protect storm water runoff.

New Regional MS4 Permit

On May 8, 2013, the SDRWQCB adopted Order R9 2013-0001, the new Regional MS4 Permit. The permit becomes effective June 27, 2013. Provision E.3.e.(1)(a) of R9 2013-0001 identifies that projects that received prior lawful approval by the time the City's SUSMP is revised in accordance with R9 2013-0001 provision E3.d that the City may allow the prior land development requirements of R9 2007-0001 (as amended January 4, 2011) to apply to the project.

The City is required to update its SUSMP land development requirements within three months of the SDRWQCB concurrence of the Carlsbad Watershed WQIP which is estimated to be 24 months after the May 8, 2013 adoption of R9 2013-0001 or approximately December 2015. The City will make project-specific determinations on a case-by-case basis as to what constitutes prior lawful approval based on its Municipal Code, Ordinances, and project milestones within the development process to identify the appropriate MS4 permit land development requirements that are applicable to each project.

The proposed project has been designed to comply with the land development requirements of Order R9 2007-001 for reliance on the City Standard Urban Stormwater Mitigation Plan (SUSMP) (as amended January 14, 2011). Long term water quality and HMP requirements are mitigated through appropriate design and mitigation requirements for residential, parking lot, and street land uses.

The proposed project is on a development schedule to achieve prior lawful approval under the land development requirements of the SDRWQCB R9 2013-0001 permit and the City's SUSMP, adopted under SDRWQCB permit R9 2007-0001, in accordance with the City's municipal ordinances and is therefore in compliance with the SDRWQCB MS4 permit at this time.

Prior to final issuance of construction permits, the City will evaluate the project's land development milestones and construction schedule and issue a Final Determination of Prior Lawful Approval and determination of applicable MS4 Permit development requirements and MS4. The project will be required to provide a design to mitigate water quality and the hydromodification management plan (HMP) under the land development requirements deemed to be in effect under the R9 2013-0001 permit at the time of permits.

At this time, it is anticipated that no substantive changes will occur with project design based on the recent adoption of R9 2013-0001and the projects development milestone schedule for construction and implementation. In summary, the proposed project will not violate any water quality standards or waste discharge requirements. Impact will be less than significant.

b) Have a potentially significant adverse impact on groundwater quality or cause or contribute to an exceedance of applicable groundwater receiving water quality objectives or degradation of beneficial uses? Less than Significant Impact

The project does not propose any uses or irrigation with groundwater or wells that would impact ground water quality or cause or contribute to an exceedance of applicable groundwater receiving water quality objectives or degradation of beneficial uses. The project proposes residential uses. The project would not result in any degradation to groundwater quality. Therefore, impacts are less than significant.

c) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? No Impact

The project does not propose the use of groundwater. Potable water for residential, commercial, and landscaping uses will be provided by Vallecitos Water District. No groundwater will be used. Thus, no impact is identified for this issue area.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site (e.g. downstream)? Less than Significant Impact

Short Term (Project Construction)

The project site is generally flat and does not support any streams or rivers. Grading would occur on the project site to prepare the site for the future residential buildings; however none of this will alter the existing drainage patterns on the site. Additionally, the project will incorporate

construction BMPs in compliance with Risk Level 2 of the General Construction Permit. These BMPs focus on areas such as good site management/housekeeping, non-stormwater management, erosion control, sediment control, run-on and run-off control, inspection/maintenance/repair, rain event action plan, and monitoring/reporting requirements. Implementation of these BMPs will further reduce the potential for erosion and siltation entering waterways. Impact will be less than significant.

Long Term (Project Operation)

The project site is undeveloped and does not support any impervious surfaces. Under the proposed project, approximately 43 percent of the site will be impervious surfaces. This includes pavement, sidewalks and roof areas. Based upon the preliminary hydrology report prepared by Excel Engineering (2013), the pre-development conditions on the site have a runoff rate of 717.16 cfs with a velocity of 4.67 fps. In the post development condition, the project will reduce the runoff to 715.01 cfs with a velocity of 4.66 fps.

Additionally, the project will incorporate Low Impact Development (LID) features and BMPs which minimize the potential for erosion and siltation. Impact will be less than significant.

e) Create a significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes? Less than Significant Impact

The project site is undeveloped and does not support any impervious surfaces. Under the proposed project, approximately 43 percent of the site will be impervious surfaces. This includes pavement, sidewalks and roof areas. Based upon the preliminary hydrology report prepared by Excel Engineering (2013), the pre-development conditions on the site have a runoff rate of 717.16 cubic feet per second with a velocity of 4.67 feet per second. In the post development condition, the project will reduce the runoff to 715.01 cfs with a velocity of 4.66 fps.

Thus, the project does not create a significant adverse environmental impact to drainage patterns due to changes in runoff rates or volumes and impacts are less than significant.

f) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on-or off-site? Less than Significant Impact

The project site is undeveloped and does not support any impervious surfaces. There are no existing streams or rivers on the project site.

Under the proposed project, approximately 43 percent of the site will be impervious surfaces. This includes pavement, sidewalks and roof areas. Based upon the preliminary hydrology report prepared by Excel Engineering (2013), the pre-development conditions on the site have a runoff rate of 717.16 cubic feet per second with a velocity of 4.67 feet per second. In the post development condition, the project will reduce the runoff to 715.01 cfs with a velocity of 4.66 fps.

Thus, the project does not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on-or off-site. Impacts would be less than significant.

g) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? Less than Significant Impact

The site is currently vacant covering an area of about 10 acres. The property fronts Mulberry Drive on the east. Adjacent north and west are single family homes. To the south are commercial developments. The site is a natural drainage sump for the surrounding areas. The land along the west and north as well as Mulberry Drive are above the subject site.
At the northwest corner of the site is a storm drain outfall. The outfall structure consists of two 36-inch RCP pipes and one 78-inch pipe with a head wall anchoring all three pipes. The pipes drain from underneath Mulberry Drive. The runoff comes from drainage basins to the northeast of the site. Storm runoff exits the pipes over a rip rap energy dissipater onto the subject site. Flows fan out and has not caused or created any appreciable channel.

Along the northerly boundary, more or less in the center of the property line, a 36-inch storm pipe, drains the area to the north.

Along the west boundary is a manufactured slope placing the adjacent development 15 to 25 feet above the subject site. A significant portion of the street and homes, above, drain onto the site either by overland flow, drainage ditches, and one storm drain box collecting run off from the street above. Water concentrates and exits the property at the southerly boundary.

At the southerly boundary is a 33-inch pipe. The pipe was installed apparently to handle low flow conditions. Immediately west of the 33-inch pipe is a soft bottom drainage channel apparently constructed to handle larger events. The channel, located at a low point on the southerly property line, consists of dirt berms approximately 3 to 4 feet high. The channel is not well defined at ground level but is quite prominent from the aerial topography prepared for this project. The majority of the water exits the site by overland flow and drains south into a triple box culvert on the north side of Mission Road. The box culvert drains under Mission Road to San Marcos Creek running east and west just south of Mission Road.

The project proposes to grade approximately 96 percent of the site. A major aspect of the development is the storm drain system meant to convey flows entering the site. The storm drain will terminate at the southerly property line. A large baffled outlet structure is proposed at the southerly terminus to ensure exit velocities are no great than current conditions. The storm drain will be constructed within a 30-foot wide storm drain easement. No structures are proposed in the easement. The area will be used for walkways and common open space Common access from Mulberry with secondary emergency only access from Laguna will be provided. The main circulation routes within the development will be paved with asphalt with the minor common drives surfaced with decorative porous pavers. A centrally located community area is proposed. Landscaped bio-retention basins, tot lots, and walkways will be constructed though out the site. All onsite runoff will drain to the bio-retention basins or other treatment areas and then to the proposed public storm drain at various locations. The storm drain pipes along the north and east boundary with tie directly to the new pipe. Runoff from the west will be collected is a lined drainage ditch which will convey flows to the outlet structure.

The project will not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff and impacts are less than significant.

h) Result in increased impervious surfaces and associated increased runoff? Less than Significant Impact

The project site is undeveloped and does not support any impervious surfaces. Under the proposed project, approximately 43 percent of the site will be impervious surfaces. This includes pavement, sidewalks and roof areas. Based upon the preliminary hydrology report prepared by Excel Engineering (2013), the pre-development conditions on the site have a runoff rate of 717.16 cubic feet per second with a velocity of 4.67 feet per second. In the post development condition, the project will reduce the runoff to 715.01 cfs with a velocity of 4.66 fps.

Thus, the project does not result in a significant increase in impervious surface or increased runoff and impacts are less than significant.

i) Result in significant alteration of receiving water quality during or following construction? Less than Significant Impact

Short Term (Project Construction)

The project will incorporate construction-related water quality BMPs to protect water quality. The requirements will be identified in the Storm Water Pollution Protection Plan (SWPPP). Such measures could include, but are not limited to:

- Use of sediment trapping devices to control sediment runoff;
- Proper containment and disposal of trash/debris;
- Use of erosion control devices to minimize runoff during rain events; and
- Additional measures to be indentified once SWPPP is available prior to the issuance of the grading permit and start of work onsite

Preparation and implementation of a SWPPP and construction-related water quality BMPs will ensure that there are no significant alterations to receiving water quality during construction. Impacts would be less than significant.

Long Term (Project Operation)

With regard to project operation, the project includes a comprehensive water quality management approach. The project incorporates sand filters, porous pavers, and bioretention features of various sizes for water quality and HMP purposes. Additionally, the project will implement a variety of site design, source control, LID, and treatment control BMPs in accordance with Order R9 2007-001 to treat to a medium pollutant removal rate or better for the pollutants of concern (nutrients and bacteria) and minimize the potential for pollutants such as sediment, trash, metals, bacteria, oil/grease and organics prior to reaching the storm drain and off-site waterways. The project is required to integrate into its design site design, source control, LID, and treatment control BMPs in accordance to R9 2007-0001 or R9 2013-0001. Thus the project will would not result in significant alterations to receiving water quality after construction and impacts are less than significant.

j) Result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical storm water pollutants (e.g. heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash). Less than Significant Impact

The project includes a comprehensive water quality management approach. The project incorporates eight sand filters and five bioretention features of various sizes for water quality and hydrology purposes (see the analysis in Section IX(k) below).

The City's Standard Urban Stormwater Management Plan (SUSMP) requires that the pollutants of concern for each impaired water body in each watershed be treated by engineered treatment controls to a medium pollutant removal efficiency or better prior to leaving each development site. This requirement results in reductions in pollutants.

The proposed project will be required to implement source control, site design, Low Impact Design (LID) standards (e.g., permeable pavement, bioretention facilities), and water quality treatment for the pollutants of concern within the watershed. Engineered treatment controls include LID and BMP techniques such as permeable pavement, media filtrations devices and bioretention facilities. The BMPs required consist of both structural and nonstructural measures, including retention basins, first flush diversion devices, porous pavements, public education, and street sweeping. Thus the project will have a less than significant impact with regard to increasing the pollutant discharges to receiving waters.

k) Be tributary to an already impaired water body as listed on the Clean Water Act Section 303(d) list. If so, can it result in an increase in any pollutant for which the water body is already impaired? Less than Significant Impact

The project site is located in the Richland (904.52) hydrologic sub-area of the San Marcos (904.5) hydrologic area of the Carlsbad watershed. Impaired waterbodies in this watershed include San Marcos Creek (DDE, phosphorus, sediment toxicity) and San Marcos Lake (ammonia as nitrogen, nutrients and phosphorus), and the Pacific Ocean (bacteria).

Anticipated pollutants from residential development sediments, nutrients, trash/debris, pesticides, and a potential for oxygen demanding substances, oil/grease, and bacteria/viruses. Potential pollutants that could occur from the parking lot areas include heavy metals, organic compounds, trash/debris, oil/grease, and to a lesser extent sediment, nutrients, and pesticides.

As detailed in IX(k), above, the project includes a comprehensive water quality management approach. The project incorporates bioretention features and sand filters of various sizes for water quality and hydrology purposes. See IX(k), above. Impacts will be less than significant.

l) Be tributary to environmentally sensitive areas (e.g. MSCP, RARE, Areas of Special Biological Significance, etc.)? If so, can it exacerbate already existing sensitive conditions? Less than Significant Impact

As detailed in IXj, above, the project includes a comprehensive water quality management approach. The project incorporates sand filters and bioretention features of various sizes for water quality and hydrology purposes. Additionally, the project will implement a variety of source control BMPs to minimize the potential for pollutants such as sediment, trash, metals, bacteria, oil/grease, and organics to reach the storm drain and off-site waterways. Additionally, the project will implement several source control BMPs to further minimize the potential to have a significant

environmental impact on surface water quality. Thus the project will not exacerbate any existing sensitive conditions in environmentally sensitive areas. Therefore, impacts are less than significant.

m) Have a potentially significant environmental impact on surface water quality, to either marine, fresh or wetland waters? Less than Significant Impact

As detailed in IXj, above, the project includes a comprehensive water quality management approach. The project incorporates sand filters and bioretention features of various sizes for water quality and hydrology purposes. See IX(k), above. Impacts are less than significant.

n) Otherwise substantially degrade water quality? Less than Significant Impact

A thorough discussion related to water quality has been provided in Sections IX(h) through IX(m). There are no additional features of the project that would result in a potential substantial degradation to water quality that was not already analyzed. Therefore, no additional impacts are identified.

o) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? No Impact

The project site is not located within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazards delineation map. While the project does propose housing, it will not place that housing in any areas that are described by this threshold. Therefore, no impacts are identified for this issue area.

p) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? No Impact

The project site is not located within a 100-year flood hazard area (General Plan Figure 6-3). Therefore, the project will not develop any structure which would impede or redirect flood flows. No impact is identified.

q) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? No Impact

The project site is not located within a 100-year flood zone nor is it located within a dam inundation zone (General Plan Figure 6-3). Therefore, no impact is identified for this issue area.

r) Inundation by seiche, tsunami, or mudflow? No Impact

The proposed project is not located near a coastline, lake, or mountainous area that would be subject to a seiche, tsunami, or mudflow. No impacts are identified for this issue area.

X. LAND USE AND PLANNING

The Mulberry Specific Plan project proposes a residential development of 126 units as well as associated infrastructure. The residential site development plan was included as Figure 2 of this document.

a) Physically divide an established community? No Impact

The proposed project would not divide an established community. The project site is currently undeveloped but designated and zoned for residential development. The placement of residential units on the site will actually create synergy with the adjacent residential and commercial uses. The project would not divide an established community and no impact is identified.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? Less than Significant Impact

The project site is designated MDR2 (Medium Density Residential 2) in the General Plan. The MDR2 designation allows for residential development with 15 to 20 du/acre. Under the current designation, up to 200 residential units could be developed on the project site.

The project site is zoned Residential 3 (R-3-10). The goal for this zone is to provide for medium-density multifamily living at a density of 12.1 to 20 du/acre in a setting located in proximity to services and bus lines with the opportunity for compatible boarding home and hotel uses. The R-3-10 zone is intended to implement and be consistent with the Medium Density Residential 1 (MDR1) and MDR2 land use designations of the General Plan.

The project proposes 126 residential units on approximately 10 acres yielding a density of 12.6 du/acre. Because the proposed density is about 16 percent lower (or 24 units fewer) than allowed under MDR2, a General Plan Amendment is required to change the land use designation to MDR1 (12.1-15 du/acre) with a Specific Plan Area. A General Plan Amendment is included as one of the discretionary actions of the project.
The proposed density is consistent with the zoning on the project site, however a rezone is proposed a discretionary action for the project to change the zoning to Specific Plan. With approval of the project, the proposed densities will be consistent with the General Plan. Impacts are less than significant.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan? No Impact

The project site is currently undeveloped. The site is not located within a Focused Planning Area or Biological Core and Linkage Area of the Multiple Habitat Conservation Program (MHCP). The project will not conflict with any applicable habitat conservation plan or natural community conservation plan. No impact is identified for this issue area.

XI. MINERAL RESOURCES

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state? No Impact

There are no known mineral resources on the site of value to the region or to residents of the state. Therefore, the project would not have an impact on any known mineral resource and no impact is identified for this issue area.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? No Impact

There are no known mineral resources on the site of value to the region or to residents of the state. Therefore, the project would not have an impact on any known mineral resource and no impact is identified for this issue area.

XII. NOISE

A noise impact analysis was prepared for the project by LdN Consulting (2014). The complete report is included as **Appendix G** of this document.

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? Less Than Significant Impact with Incorporation of Mitigation

Existing Noise Environment

Noise measurements were taken in two areas of the project site in March 2014. The results of the noise level measurements are presented in **Table 9**. The measurements were taken on site to establish a baseline of the vehicle noise from adjacent Mulberry Drive as well as commercial activities along Mulberry Drive and the light industrial/commercial on Mission Road. As can be seen in measurement location 2 (ML2), the adjacent commercial and light industrial activities in combination with the background roadway traffic was found to be below 50 dBA. During the measurements it was observed that the noise was primarily from background roadway noise and very limited noise was observed from the adjacent uses. The noise modeling locations can be seen in **Figure 5**.

Table 9. Measured Ambient Noise Levels

Measurement Identification	Description	Time	Noise Levels (dBA Leq)					
			Leq	Lmax	Lmin	L10	L50	L90
ML 1	Along Mulberry Drive	11:20-11:35 a.m.	62.3	72.4	48.6	68.0	60.4	49.4
ML 2	Western portion of site	11:40-11:55 a.m.	49.4	62.3	42.8	51.2	47.4	45.1

Source: Ldn Consulting (2014)

Future On-site Noise Analysis

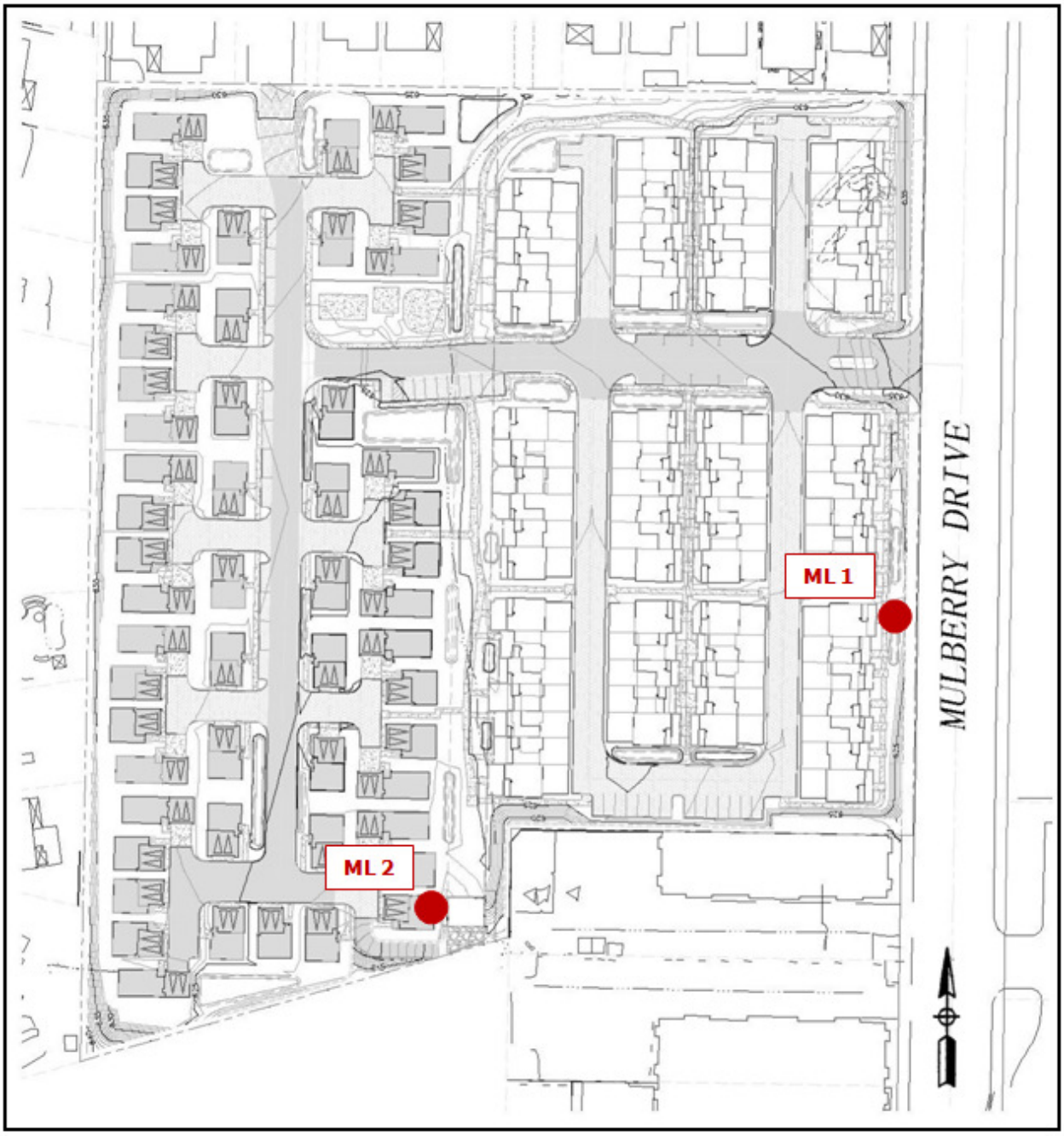
To determine the future noise environment and impact potentials the Sound32 model was utilized. **Table 10** presents the roadway parameters used in the analysis including the peak traffic volumes, vehicle speeds, and the hourly traffic flow distribution (vehicle mix). The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the Sound32 Model. The buildout conditions include the future traffic volume forecasts provided in the Project's Traffic Study (RBF Consulting 2014).

Table 10. Future Traffic Parameters

Roadway	Average Daily Traffic (ADT)	Peak Hour Volumes	Modeled Speeds (MPH)	Vehicle Mix %		
				Auto	Medium Trucks	Heavy Trucks
Mulberry Drive	12,206	1,221	45	96	2	2
Mission Avenue	31,283	3,129	45	96	2	2
Borden Road	13,161	1,317	40	96	2	2

Source: Ldn Consulting (2014)

Figure 5. Noise Modeling Locations



To evaluate the potential noise impacts on the proposed development, outdoor observers were located throughout the site and placed five feet above the finished pad elevation. The modeled observer locations for the potential outdoor use areas are presented in **Figure 6**. The modeling results are presented in **Table 11** for the ground floor outdoor areas and the second and third floor building facades.

Table 11. Future Exterior Noise Levels

Receptor Number	1st Floor (Ground Floor) Unmitigated Noise Level (dBA CNEL)	2nd Floor Unmitigated Noise Level (dBA CNEL)	3rd Floor Unmitigated Noise Level (dBA CNEL)
1	57	60	n/a
2	58	61	n/a
3	59	61	n/a
4	59	62	62
5	60	63	64
6	**68**	**69**	**69**
7	**68**	**69**	**69**
8	**68**	**69**	**69**
9	**66**	**69**	**69**
10	65	**69**	**69**
11	65	**69**	**69**
12	62	64	64
13	59	62	62
14	59	62	n/a
15	58	61	n/a

Source: Ldn Consulting 2014

Based upon the modeling results, there will be elevated exterior noise levels in exterior spaces of some of the multi-family residential along Mulberry Drive, including first-floor courtyard/patio areas and upper-floor balconies. This represents a significant impact (**Impact N-1**).

Mitigation measures MM-N-1 and MM-N-2 will be required as a condition of project approval. With implementation of these mitigation measures, onsite noise levels will be consistent with the Noise Element of the City's General Plan and noise impacts will be reduced to below a level of significance.

MM-N-1 A 4-foot high noise barrier shall be required at the patio/courtyard areas on select multi-family residences that face Mulberry Drive, as shown in **Figure 7**, Noise Barrier Location. Barriers could include walls, glass, plexi-glass or a combination of these materials to meet the required noise attenuation. Verification of the type of noise reduction barrier material shall be provided to the Planning Director for review and approval prior to grading permit issuance.

MM-N-2 A final noise assessment shall be prepared prior to the issuance of the first building permit. This final report would identify the interior noise requirements based upon architectural and building plans to meet the City's established interior noise limit of 45 dBA CNEL[1].

[1] Interior noise levels of 45 dBA CNEL can easily be obtained with conventional building construction methods and providing a closed window condition requiring a means of mechanical ventilation (e.g., air conditioning).

Figure 6. Modeled Receptor Location

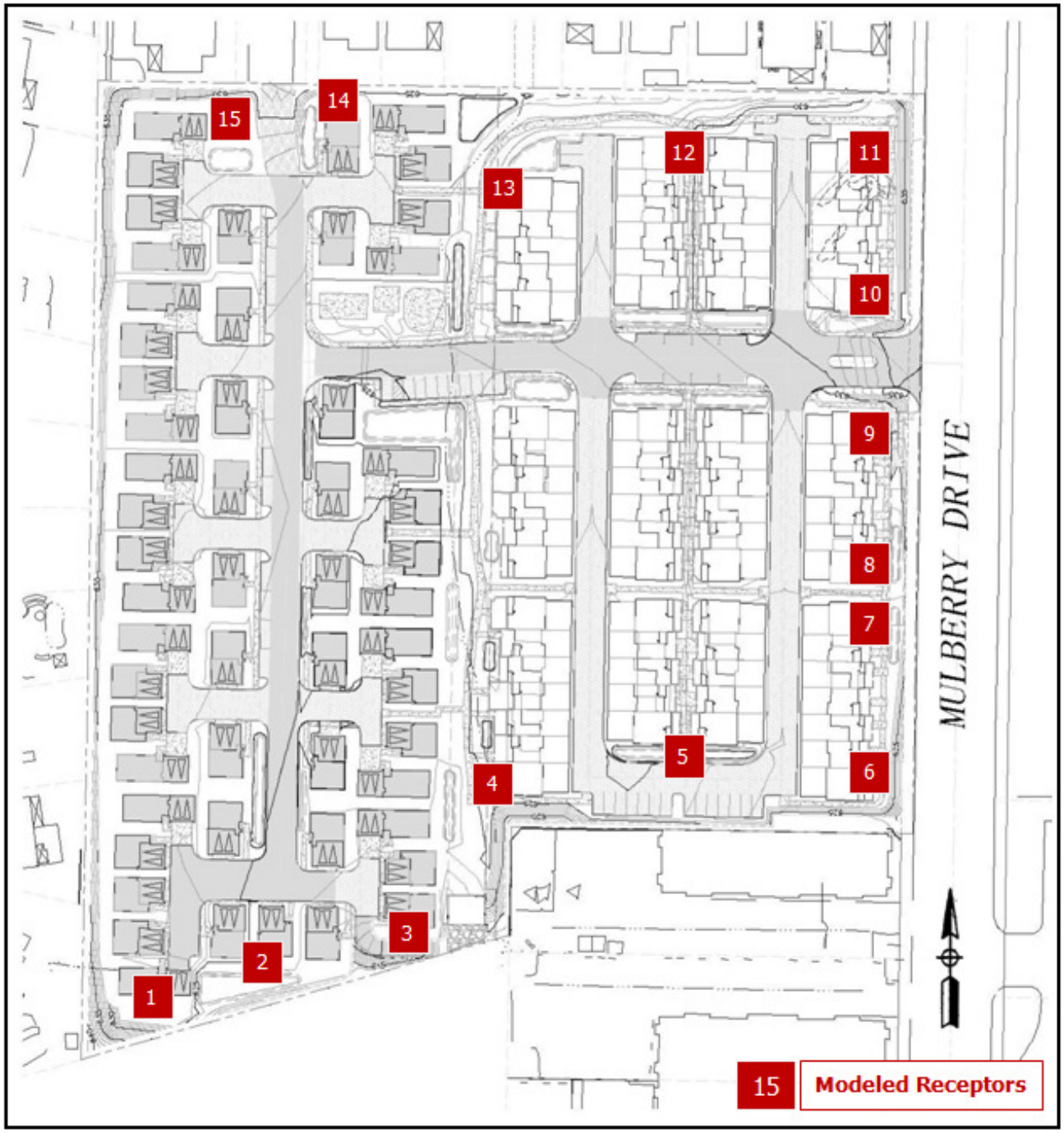
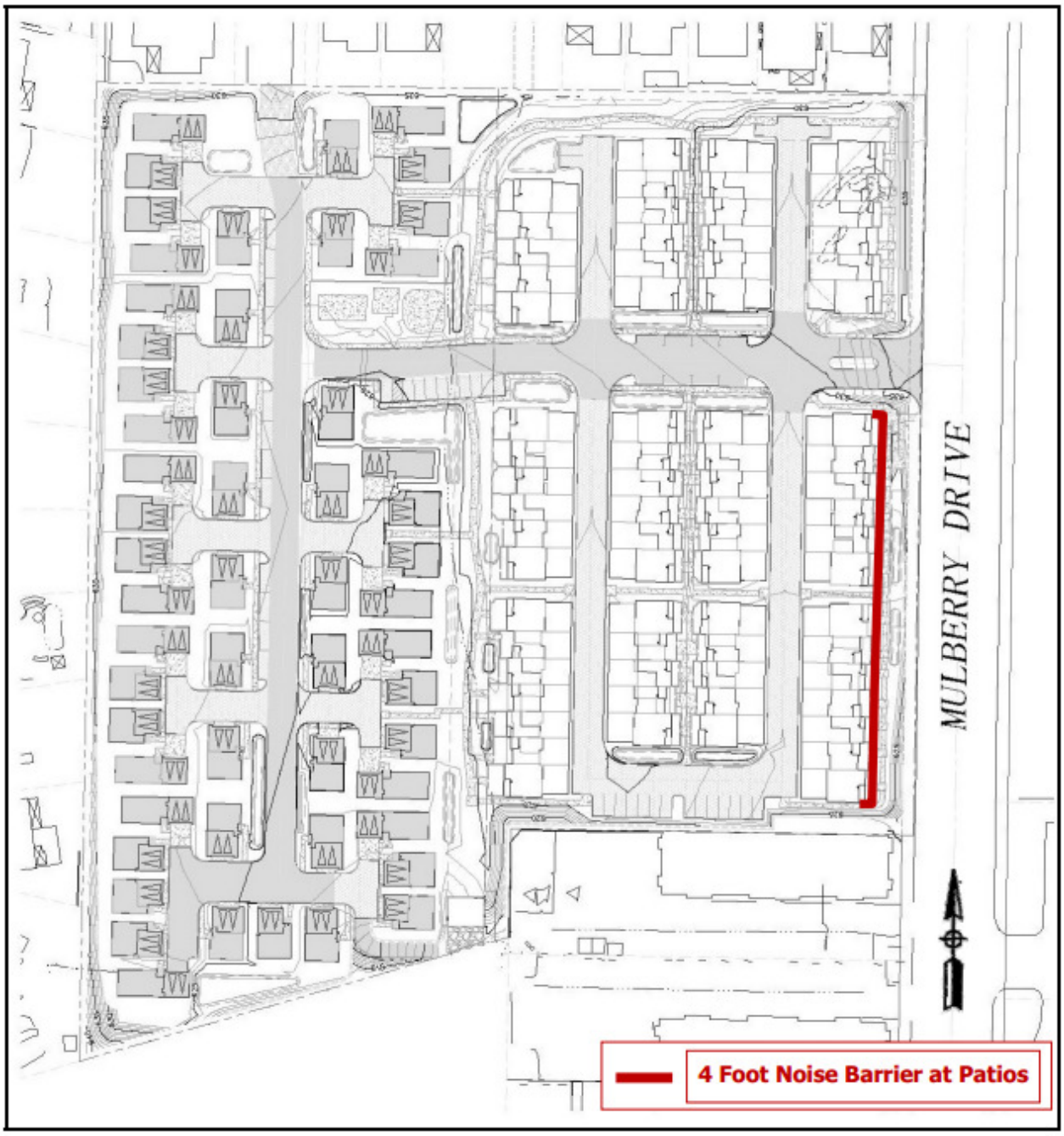


Figure 7. Residential Buildings Requiring Patio/Courtyard and Balcony Noise Mitigation



b) Exposure of persons to or generation of excessive groundborne vibrations or groundborne noise levels? Less Than Significant Impact

The project site is generally flat. The project will not require any blasting and grading will be limited, since the site is already flat. The project proposes residential uses. These uses are not characterized as creating excessive groundborne vibrations or groundborne noise levels. Therefore, the project will not expose persons to or generation of excessive groundborne vibrations or groundborne noise levels. Impacts are less than significant.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? Less than Significant

Project Related Off-site Transportation Noise

Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of 3 dBA. Therefore, the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of 3 dBA. Community noise level changes greater than 3 dBA are often identified as audible and considered potentially significant, while changes less than 1 dBA will not be discernible to local residents. In the range of 1 to 3 dBA, residents who are very sensitive to noise may perceive a slight change.

Community noise exposures are typically over a long time period rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely greater than 1 dBA, and 3 dBA appears to be an appropriate threshold for most people. For the purposes of this analysis direct and cumulative roadway noise impacts would be considered significant if the project increases noise levels for a noise-sensitive land use by 3 dBA CNEL and if the project increases noise levels above an unacceptable noise level per the City's General Plan in the area adjacent to the roadway segment.

The projected off-site project-related roadway segment noise levels were calculated using the methods in the Highway Noise Model published by the Federal Highway Administration (FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December, 1978).

Project Direct Off-Site Noise Impact Analysis

To determine if direct off-site noise level increases associated with the development of the proposed project will create noise impacts, the noise levels for the existing conditions were compared with the noise level increase from the project. Utilizing traffic assessment prepared for the project (RBF Consulting 2014) noise contours were developed for the following traffic scenarios:

- Existing: Current day noise conditions without construction of the project.
- Existing Plus Project: Current day noise conditions plus the completion of the project.
- Existing vs. Existing Plus Project: Comparison of the direct project related noise level increases in the vicinity of the project site.

The noise levels and reference distances to the 60 dBA CNEL contours for the roadways in the vicinity of the project site are given in **Table 12** for the Existing Scenario and in **Table 13** for the Existing Plus Project Scenario. It should be noted that the values in Tables 12 and 13 do not take into account the effect of any noise barriers or topography that may affect ambient noise levels.

Table 12. Existing Noise Levels

Roadway	Roadway Segment	ADT	Vehicle Speeds (MPH)	Noise Level @ 50-Feet (dBA CNEL)	60 dBA CNEL Contour Distance (Feet)
Borden Road	Twin Oaks Valley Rd. to Woodward St.	8,866	40	67.6	160
	Woodward St. to Vineyard Rd.	5,358	40	65.4	115
	Vineyard Rd. to Mulberry Dr.	6,341	40	66.1	128
	Mulberry Dr. to Rose Ranch Rd.	8,443	40	67.4	155
Twin Oaks Valley Road	Borden Rd. to Richmar Ave.	26,751	40	72.4	335
	Richmar Ave. to San Marcos Blvd.	28,126	40	72.6	346
	San Marcos Blvd. to SR-78 WB Ramps	39,498	40	74.1	434
	SR-78 WB Ramps to SR-78 EB Ramps	44,049	40	74.5	466
Vineyard Road	Borden Rd. to Woodward St.	3,805	40	63.9	91
Mulberry Drive	Rose Ranch Rd. to Borden Rd.	3,453	45	64.6	102
	Borden Rd. to Mission Rd.	9,347	45	68.9	197
Mission Road	San Marcos Blvd. to Woodward St. to Mulberry Dr.	20,145	45	72.3	329
	Mulberry Dr. to Mission Hills Ct.	21,426	45	72.5	343
	Mission Hills Ct. to Woodland Pkwy.	19,156	45	72.1	318
San Marcos Blvd	Twin Oaks Valley Rd. to Rancheros Dr.	22,631	40	71.7	299
	Rancheros Dr. to Mission Rd.	15,780	40	70.1	235
Woodland Parkway	Mission Rd. to Rancheros Dr.	17,779	40	70.6	255
Rancheros Drive	SR-78 WB Ramps to Woodland Pkwy	15,926	45	71.3	282

Source: Ldn Consulting 2014

Table 13. Existing + Project Noise Levels

Roadway	Roadway Segment	ADT1	Vehicle Speeds (MPH)	Noise Level @ 50-Feet (dBA CNEL)	60 dBA CNEL Contour Distance (Feet)
Borden Road	Twin Oaks Valley Rd to Woodward St.	8,987	40	67.6	162
	Woodward St. to Vineyard Rd.	5,479	40	65.5	116
	Vineyard Rd. to Mulberry Dr.	6,502	40	66.2	130
	Mulberry Dr. to Rose Ranch Rd.	8,564	40	67.4	157
Twin Oaks Valley Road	Borden Rd. to Richmar Ave.	26,822	40	72.4	335
	Richmar Ave. to San Marcos Blvd.	28,197	40	72.6	346
	San Marcos Blvd. to SR-78 WB Ramps	39,800	40	74.1	436
	SR-78 WB Ramps to SR-78 EB Ramps	44,230	40	74.6	468
Vineyard Road	Borden Rd. to Woodward St.	3,845	40	64.0	92
Mulberry Drive	Rose Ranch Rd. to Borden Rd.	3,473	45	64.6	102
	Borden Rd. to Mission Rd.	10,053	45	69.3	207
Mission Road	San Marcos Blvd. to Woodward St. to Mulberry Dr.	20,528	45	72.4	333
	Mulberry Dr. to Mission Hills Ct.	21,749	45	72.6	347
	Mission Hills Ct. to Woodland Pkwy.	19,458	45	72.1	322
San Marcos Blvd	Twin Oaks Valley Rd. to Rancheros Dr.	22,954	40	71.7	302
	Rancheros Dr. to Mission Rd.	16,103	40	70.2	238
Woodland Parkway	Mission Rd. to Rancheros Dr.	18,001	40	70.7	257
Rancheros Drive	SR-78 WB Ramps to Woodland Pkwy.	16,007	45	71.3	282

Source: LdN Consulting 2014

Table 14 presents the comparison of the Existing Year with and without project-related noise levels. As shown in Table 14, the overall roadway segment noise levels will increase from 0.0 dBA CNEL to 0.4 dBA CNEL with the development of the proposed project. None of the segments have an increase of 3 dBA. Therefore, the project's direct contribution to off-site roadways is less than significant.

Table 14. Existing vs. Existing + Project Noise Levels

Roadway	Roadway Segment	Existing Noise Level @ 50-Feet (dBA CNEL)	Existing Plus Project Noise Level @ 50-Feet (dBA CNEL)	Project Related Noise Level Increase (dBA CNEL)
Borden Road	Twin Oaks Valley Rd to Woodward St.	67.6	67.6	0.0
	Woodward St. to Vineyard Rd.	65.4	65.5	0.1
	Vineyard Rd. to Mulberry Dr.	66.1	66.2	0.1
	Mulberry Dr. to Rose Ranch Rd.	67.4	67.4	0.0
Twin Oaks Valley Road	Borden Rd. to Richmar Ave.	72.4	72.4	0.0
	Richmar Ave to San Marcos Blvd.	72.6	72.6	0.0
	San Marcos Blvd to SR-78 WB Ramps	74.1	74.1	0.0
	SR-78 WB Ramps to SR-78 EB Ramps	74.5	74.6	0.1
Vineyard Road	Borden Rd to Woodward St.	63.9	64.0	0.0
Mulberry Drive	Rose Ranch Rd to Borden Rd.	64.6	64.6	0.0
	Borden Rd to Mission Rd.	68.9	69.3	0.4
Mission Road	San Marcos Blvd to-Woodward St. to Mulberry Dr.	72.3	72.4	0.1
	Mulberry Dr. to Mission Hills Ct.	72.5	72.6	0.1
	Mission Hills Ct. to Woodland Pkwy.	72.1	72.1	0.0
San Marcos Blvd	Twin Oaks Valley Rd. to Rancheros Dr.	71.7	71.7	0.0
	Rancheros Dr. to Mission Rd.	70.1	70.2	0.1
Woodland Parkway	Mission Rd. to Rancheros Dr.	70.6	70.7	0.1
Rancheros Drive	SR-78 WB Ramps to Woodland Pkwy.	71.3	71.3	0.0

Source: Ldn Consulting 2014

Cumulative Off-Site Noise Impact Analysis

To determine if cumulative off-site noise level increases associated with the development of the project and other planned or permitted projects in the vicinity will create noise impacts, the noise levels for the near-term project buildout and other planned and permitted projects were compared with the existing conditions. Utilizing the project's traffic assessment (RBF Consulting 2014) noise contours were developed for the following traffic scenarios:

- ***Existing:*** Current day noise conditions without construction of the project.
- ***Existing Plus Cumulative Projects Plus Project:*** Current day noise conditions plus the completion of the project and the completion of other permitted, planned projects, or approved ambient growth factors.
- ***Existing vs. Existing Plus Cumulative Plus Project:*** Comparison of the existing noise levels and the related noise level increases from the combination of the project and all other planned or permitted projects in the vicinity of the site.

The existing noise levels and reference distances to the 60 dBA CNEL contours for the roadways in the vicinity of the project site are given in Table 13 above for the Existing Scenario. The near-term cumulative noise conditions are provided in **Table 15**. No noise barriers or topography that may affect noise levels were incorporated in the calculations.

Table 15. Existing + Project + Cumulative Roadway Noise Levels

Roadway	Roadway Segment	ADT1	Vehicle Speeds (MPH)	Noise Level @ 50-Feet (dBA CNEL)	60 dBA CNEL Contour Distance (Feet)
Borden Road	Twin Oaks Valley Rd to Woodward St.	9,919	40	68.1	173
	Woodward St. to Vineyard Rd.	6,336	40	66.1	128
	Vineyard Rd. to Mulberry Dr.	7,335	40	66.8	141
	Mulberry Dr. to Rose Ranch Rd.	10,127	40	68.2	175
Twin Oaks Valley Road	Borden Rd. to Richmar Ave.	29,556	40	72.8	358
	Richmar Ave to San Marcos Blvd.	30,558	40	73.0	366
	San Marcos Blvd to SR-78 WB Ramps	45,430	40	74.7	476
	SR-78 WB Ramps to SR-78 EB Ramps	52,886	40	75.3	527
Vineyard Road	Borden Rd to Woodward St.	4,253	40	64.4	98
Mulberry Drive	Rose Ranch Rd to Borden Rd.	3,657	45	64.9	106
	Borden Rd to Mission Rd.	11,168	45	69.7	222
Mission Road	San Marcos Blvd to-Woodward St. to Mulberry Dr.	23,071	45	72.9	360
	Mulberry Dr. to Mission Hills Ct.	23,464	45	72.9	365
	Mission Hills Ct. to Woodland Pkwy.	21,127	45	72.5	340
San Marcos Blvd	Twin Oaks Valley Rd. to Rancheros Dr.	25,077	40	72.1	320
	Rancheros Dr. to Mission Rd.	17,631	40	70.6	253
Woodland Parkway	Mission Rd. to Rancheros Dr.	20,613	40	71.2	281
Rancheros Drive	SR-78 WB Ramps to Woodland Pkwy.	19,683	45	72.2	324

Source: Ldn Consulting 2014

Table 16 presents the comparison of the Existing Year and the Near-Term Cumulative noise levels. The overall roadway segment noise levels will increase from 0.3 dBA CNEL to 0.9 dBA CNEL with the development of the project. No cumulative noise increase of more than 3 dBA CNEL was found; therefore, a less than significant impact is anticipated.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? Less Than Significant Impact

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders and scrapers. Such equipment can reach relatively high noise levels. Grading activities typically represent one of the highest potential sources for noise impacts. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours.

The City of San Marcos Municipal Code limits grading, extraction, and construction activities between 7:00 a.m. and 4:30 p.m. Monday through Friday and no grading, extraction or construction is allowed on the weekends or holidays. The Municipal Code does not set noise limits on construction activities. Commonly, the City has utilized the County of San Diego's Noise Ordinance noise limit of 75 dBA for other projects.

Table 16. Existing vs. Existing + Project + Cumulative Roadway Noise Levels

Roadway	Roadway Segment	Existing Noise Level @ 50-Feet (dBA CNEL)	Existing Plus Project Noise Level @ 50-Feet (dBA CNEL)	Project Related Noise Level Increase (dBA CNEL)
Borden Road	Twin Oaks Valley Rd to Woodward St.	67.6	68.1	0.5
	Woodward St. to Vineyard Rd.	65.4	66.1	0.7
	Vineyard Rd. to Mulberry Dr.	66.1	66.8	0.7
	Mulberry Dr. to Rose Ranch Rd.	67.4	68.2	0.8
Twin Oaks Valley Road	Borden Rd. to Richmar Ave.	72.4	72.8	0.4
	Richmar Ave to San Marcos Blvd.	72.6	73.0	0.4
	San Marcos Blvd to SR-78 WB Ramps	74.1	74.7	0.6
	SR-78 WB Ramps to SR-78 EB Ramps	74.5	75.3	0.8
Vineyard Road	Borden Rd to Woodward St.	63.9	64.4	0.5
Mulberry Drive	Rose Ranch Rd to Borden Rd.	64.6	64.9	0.3
	Borden Rd to Mission Rd.	68.9	69.7	0.8
Mission Road	San Marcos Blvd to-Woodward St. to Mulberry Dr.	72.3	72.9	0.6
	Mulberry Dr. to Mission Hills Ct.	72.5	72.9	0.4
	Mission Hills Ct. to Woodland Pkwy.	72.1	72.5	0.4
San Marcos Blvd	Twin Oaks Valley Rd. to Rancheros Dr.	71.7	72.1	0.4
	Rancheros Dr. to Mission Rd.	70.1	70.6	0.5
Woodland Parkway	Mission Rd. to Rancheros Dr.	70.6	71.2	0.6
Rancheros Drive	Twin Oaks Valley Rd to Woodward St.	71.3	72.2	0.9

Source: Ldn Consulting 2014

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise-generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from 60 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor, and reduced to 63 dBA at 200 feet from the source.

Using a point-source noise prediction model, calculations of the expected construction noise impacts were completed. The essential model input data for these performance equations include the source levels of each type of equipment, relative source to receiver horizontal and vertical separations, the amount of time the equipment is operating in a given day, also referred to as the duty-cycle, and any transmission loss from topography or barriers.

The equipment needed for the development will consist of up to a tractor/backhoe, a hydraulic crane, a loader/grader, a side boom, a water truck, a concrete truck, a concrete pump, haul trucks, a paver, a roller/compactor, and two scrapers. Based on the EPA noise emissions, empirical data and the amount of equipment needed, worst case noise levels from the construction equipment for site preparation would occur during the grading operations.

Construction Grading Noise Analysis

The grading activities will consist of the preparation of internal roadways, parking and the finished pads. The grading equipment will be spread out over the project site from distances near the occupied property lines to distances of 400 feet or more away. Based upon the site plan the majority of the

grading operations, on average, will occur more than 200 feet from the property lines. This means that most of the time the average distance from all the equipment to the nearest property line is over 200 feet. **Table 17** presents the anticipated construction noise levels. As can be seen in Table 17, at an average distance of 300 feet from the construction activities to the nearest property line would result in a noise attenuation of -12.0 dBA.

Table 17. Construction Noise Levels

Equipment Type	Quantity Used	Source @ 50 Feet (dBA)	Cumulative Noise Level @ 50 Feet (dBA)
Tractor/Backhoe	1	72	72.0
Dozer D9 Cat	1	74	74.0
Hydraulic Crane	1	78	78.0
Loader/Grader	1	73	73.0
Side Boom	1	72	72.0
Water Trucks	1	70	70.0
Concrete Trucks	1	75	75.0
Concrete Pump	1	82	82.0
Dump Trucks	1	75	75.0
Paver/Blade	1	75	75.0
Roller/Compactor	1	74	74.0
Scrapers	2	75	78.0
		Cumulative Level	86.9
		Distance to Sensitive Use	200
		Noise Reduction due to Distance	-12.0
		Property Line Noise Level	**74.9**

Given this and the fact that not all the equipment will be operating at the same time due to site constraints and normal construction scheduling, the noise levels will comply with the 75 dBA Leq standard at the property lines. Therefore, impacts are anticipated to be less than significant and no mitigation is required during construction of the proposed project. Additionally, all equipment should be properly fitted with mufflers and all staging and maintenance should be conducted as far away for the existing residences as possible.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? No Impact

The nearest airport is the McClellan-Palomar Airport in Carlsbad, which is located approximately 7 miles west of the project site. At this distance, the airport would not subject future residents or workers in the project area to excessive noise levels due to airport operations. Therefore, no impact is identified.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? No Impact

The project site is not located within the vicinity of a private airstrip. Therefore, no impact is identified for this issue area.

XIII. POPULATION AND HOUSING

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? Less than Significant Impact

The project proposes the construction of 126 residential units and associated infrastructure. This will result in an approximately 380 new residents. The project proposes residential development at a density that is lower that allowed under the General Plan. The project is proposed in an area of the city that is already development and is adjacent to existing infrastructure including water/sewer lines and roadways.

The off-site water and sewer pipe upgrades that are proposed as part of the project are being sized only to support the project and would not be characterized as growth inducing. Any improvements associated with the project, including resizing of utility lines, has been considered in this analysis. Therefore, a less than significant impact is identified.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? No Impact

There is no existing housing on the project site and the project site is vacant. Thus the project would not result in the displacement of any existing housing. The project proposes 126 residential units and will add to the housing stock in San Marcos. Therefore, no impact is identified for this issue area.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? No Impact

There is no existing housing on the project site and the project site is vacant. Thus the project would not result in the displacement of any existing housing. Therefore, the construction would not displace a substantial number of people. The project proposes 126 residential units and will add to the housing stock in San Marcos. Therefore, no impact is identified for this issue area.

XIV. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection? Less Than Significant Impact

The project site would increase demand on fire protection services due to the construction of 126 residential units. The City of San Marcos Fire Department was contacted for their input on the project, including information regarding stations serving the project, current staffing, response times, and other items related to fire protection services. The Fire Department's response is included with the service provider letters in **Appendix H**.

The project site is closest to Stations 1 and 3. Fire Station 1 is located at 180 West Mission Road and is staffed with one paramedic engine company (3 personnel), one paramedic truck company

(3 personnel) and one paramedic ambulance (2 personnel). Fire Station 3 is located at 404 Woodland Parkway and is staffed with one paramedic engine company (3 personnel) and one paramedic ambulance (2 personnel). The average response time to the project site from either Station 1 or 3 is approximately four minutes.

The San Marcos Fire Department (2014) indicated that current staff levels and equipment at these stations are adequate to serve the project; however, the Fire Department continues to experience an increase in emergency and non-emergency response and additional resources will be needed in the future. The project would be contained within a preexisting Fire Community Facilities District and impacts are less than significant.

Additionally, the project will implement the following design features, per Fire Department requirements:

- Roadways serving the project shall have a minimum improved paved width of 24 feet with an additional 8 feet to each side for parking. Any other roadway features such as cul-de-sacs and gates must meet the design criteria of the San Marcos Fire Department.
- Any automatic gates are required to have a Knox rapid entry system and emergency vehicle strobe detector.
- Fire hydrants with an adequate water supply must be installed at locations approved by the San Marcos Fire Department. Hydrant spacing shall be 300 feet apart for multi-family areas. For single-family areas, hydrants shall be spaced 600 feet apart.
- Residential structures shall be outfitted with fire sprinklers per California Building Code 2010 edition and City Ordinance.

b) Police protection? Less Than Significant Impact

The project site would increase demand on police protection services due to the construction of 126 residential units. The project site would be served by the San Marcos Station located at 182 Santar Place, which is located approximately 1.5 miles from the project site. Current staffing levels are adequate to meet current demand. The addition of development associated with this project will result in an increase in demand on police protection services. Additionally, the Sheriff's Department encourages the use of design features in the project that are consistent with the "Crime Prevention Through Environmental Design" techniques.

Any incremental effects of the project on police protection services will be offset by the City requirement for payment of fees to a preexisting Community Facilities District for police protection. Therefore, impacts to police protection services are determined to be less than significant.

c) Schools? Less than Significant Impact

The project is located within the service boundary of the San Marcos Unified School District (SMUSD). Existing schools that would serve the project include:

- Richland Elementary School, 910 Borden Road
- Woodland Park Middle School, 1270 Rock Spring Road
- Mission Hills High School, 1 Mission Hills Court

The current enrollment and planned capacity of each of these schools is presented below.

School	Enrollment	Permanent Capacity
Richland Elementary School	749	1,125
Woodland Park Middle School	1,254	1,458
Mission Hills High School	2,540	2,565

Based upon correspondence from SMUSD, the student generation rate for single-family detached residences is 0.4748 students (2014). For attached units, the rate is 0.2036. When these generation rates are applied to the project, it is anticipated that the project would generate 42 students (K-12). The correspondence from SMUSD is included with the service provider letters in **Appendix H.**

There is current capacity for these students in the schools that would serve the project. However, SMUSD does note that nearly 30 percent of their current classrooms are portable/relocatable classrooms and while the students can be accommodated at the schools nearest to them, there is a District-wide capacity shortage of 3,294 students.

The project applicant will be required to pay school mitigation fees pursuant to California Education Code Section 17620 and Government Code Section 65995. These fees will assist in funding the SMUSD's long-rage plans. Current Level II school fees are $3.79/s.f. for residential.

d) Parks? Less than Significant Impact

The closest community park to the project site is Hollandia Park located at 12 Mission Hills Court. Hollandia Park includes two lighted softball fields, a lighted multi-purpose field, off-leash dog park, and lighted skate park, playground with climbing wall, picnic area, horseshoe pits, amphitheater and multi-use trails.

A private recreation area is proposed in the north central portion of the project site and will be for the exclusive use of project residents and their guests. There will be a recreation area with a pool, restroom building, BBQs, tot lot and benches. A meandering paseo is also incorporated into the project design.

Since the project provides recreational amenities for future residents, impacts are less than significant.

e) Other public facilities? Less than Significant Impact

In Sections XIV(a) through XIV(d), the analysis concluded that the project would have a less than significant impact related to police protection, fire protect, schools and parks. The project would not result in an impact to any other public facilities. Impacts are less than significant.

XV. RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated? Less than Significant Impact

The closest community park to the project site is Hollandia Park located at 12 Mission Hills Court. Hollandia Park includes two lighted softball fields, a lighted multi-purpose field, off-leash dog park,

lighted skate park, playground with climbing wall, picnic area, horseshoe pits, amphitheater and multi-use trails.

A private recreation area is proposed in the north central portion of the project site and will be for the exclusive use of project residents and their guests. There will be a recreation area with a pool, restroom building, BBQs, tot lot and benches. A meandering paseo is also incorporated into the project design.

Since the project provides recreational amenities for future residents, impacts are less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? Less Than Significant Impact

A private recreation area is proposed in the north central portion of the project site and will be for the exclusive use of project residents and their guests. There will be a recreation area with a pool, restroom building, BBQs, tot lot and benches. A meandering paseo is also incorporated into the project design.

These recreational amenities are included as part of the project description and within the footprint of the proposed project. Any impacts associated with the development of these recreational amenities are considered in this CEQA document. Impacts are less than significant.

XVI. TRANSPORTATION/TRAFFIC

A traffic impact analysis was prepared for the project by RBF Consulting (2014). The complete report is included as **Appendix I** of this document. The project study area included 18 intersections and 18 roadway segments:

Intersections

- Mulberry Drive / Rose Ranch Road
- Twin Oaks Valley Road / Borden Road
- Borden Road / Woodward Street
- Borden Road / Vineyard Road
- Borden Road / Mulberry Drive
- Borden Road / Rose Ranch Road
- Borden Road / Woodland Parkway
- San Marcos Boulevard / Twin Oaks Valley Road
- San Marcos Boulevard / Rancheros Drive
- San Marcos Boulevard / Mission Road
- Mission Road / Mulberry Drive
- Mission Road / Mission Hills Court
- Mission Road / Woodland Parkway
- Twin Oaks Valley Road / SR-78 Westbound Ramps
- Twin Oaks Valley Road / SR-78 Westbound Ramps
- Rancheros Drive / SR-78 Westbound Ramps
- Woodland Parkway / Rancheros Drive
- Mulberry Drive / Project Driveway

Roadway Segments

- Borden Road, from Twin Oaks Valley Road to Woodward Street
- Borden Road, from Woodward Street to Vineyard Road
- Borden Road, from Vineyard Road to Mulberry Drive
- Borden Road, from Mulberry Drive to Rose Ranch Road
- Twin Oaks Valley Road, from Borden Road to Richmar Avenue
- Twin Oaks Valley Road, from Richmar Avenue to San Marcos Boulevard
- Twin Oaks Valley Road, from San Marcos Boulevard to SR-78 Westbound Ramps
- Twin Oaks Valley Road, from SR-78 Westbound Ramps to SR-78 Eastbound Ramps
- Vineyard Road, from Borden Road to Woodward Street
- Mulberry Drive, from Rose Ranch Road to Borden Road
- Mulberry Drive, from Borden Road to Mission Road
- Mission Road, from San Marcos Boulevard to Mulberry Drive
- Mission Road, from Mulberry Drive to Mission Hills Court
- Mission Road, from Mission Hills Court to Woodland Parkway
- San Marcos Boulevard, from Twin Oaks Valley Road to Rancheros Drive
- San Marcos Boulevard, from Rancheros Drive to Mission Road
- Woodland Parkway, from Mission Road to Rancheros Drive
- Rancheros Drive, from SR-78 Westbound Ramps to Woodland Parkway

The traffic impact analysis considered the following analysis scenarios:

- Existing Conditions
- Existing Plus Project Conditions
- Existing Plus Cumulative Conditions Without Project
- Existing Plus Cumulative Conditions With Project
- Horizon Year 2035 Conditions Without Project
- Horizon Year 2035 Conditions With Project

a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? Less Than Significant Impact

Existing Level of Service

To determine the existing operation of the study intersections, intersection turning movement counts were taken on a typical weekday during the a.m. (7:00 to 9:00 a.m.) and p.m. (4:00 to 6:00 p.m.) peak period in late February 2014. **Table 18** summarizes the existing a.m. and p.m. peak hour intersection levels of service (LOS) of the study intersections based on the existing peak hour intersection volumes and existing intersection geometry. As shown in Table 18, all study intersections currently operate at acceptable LOS (LOS D) or better during the peak hours.

Daily roadway segment LOS were calculated based on the roadway classification and capacity as well as existing ADT volumes. Table 19 presents the results of the existing conditions daily roadway segment LOS analysis. As shown in Table 19, all study roadway segments currently operate at acceptable LOS (LOS D or better) except for Rancheros Drive from SR-78 Westbound Ramps to Woodland Parkway, which is currently operating at LOS F based on the existing ADT and daily roadway capacity.

Table 18. Existing Peak Hour Intersection Conditions

Study Intersection	Existing Conditions	
	AM Delay [(1)] – LOS	PM Delay [(1)] – LOS
Mulberry Dr / Rose Ranch Rd	10.5 – B	8.8 – A
Twin Oaks Valley Rd / Borden Rd	47.6 – D	33.6 – C
Borden Rd / Woodward St	29.5 – C	30.5 – C
Borden Rd / Vineyard Rd	24.5 – C	26.8 – C
Borden Rd / Mulberry Dr	34.8 – C	30.1 – C
Borden Rd / Rose Ranch Rd	24.1 – C	23.4 – C
Borden Rd / Woodland Pkwy	32.8 – C	30.2 – C
San Marcos Blvd / Twin Oaks Valley Rd	39.0 – D	44.0 – D
San Marcos Blvd / Rancheros Dr	19.0 – B	26.9 – C
San Marcos Blvd / Mission Rd	26.1 – C	28.1 – C
Mission Rd / Mulberry Dr	30.0 – C	24.1 – C
Mission Rd / Mission Hills Ct	29.0 – C	15.0 – B
Mission Rd / Woodland Pkwy	38.7 – D	32.3 – C
Twin Oaks Valley Rd / SR-78 WB Ramps	18.8 – B	16.4 – B
Twin Oaks Valley Rd / SR-78 EB Ramps	37.8 – D	28.1 – C
Rancheros Dr / SR-78 WB Ramps	27.5 – D	20.5 – C
Woodland Pkwy / Rancheros Dr	30.7 – C	32.2 – C

Notes: [(1)] Seconds of delay per vehicle.
[(2)] Unsignalized, all-way stop controlled intersection.
[(3)] Unsignalized, minor street stop controlled intersection.

Table 19. Existing Daily Roadway Segment Conditions

Roadway	Location	Class (# Lanes)	LOS E Capacity	Existing Conditions		
				ADT	V/C	LOS
Borden Road	Twin Oaks Valley Rd to Woodward St	Arterial (4)	30,000	8,866	0.296	A
	Woodward St to Vineyard Rd	Arterial (4)	30,000	5,358	0.179	A
	Vineyard Rd to Mulberry Dr	Arterial (3)	22,500	6,341	0.282	A
	Mulberry Dr to Rose Ranch Rd	Collector (2)	15,000	8,443	0.563	C
Twin Oaks Valley Road	Borden Rd to Richmar Ave	Arterial (4)	40,000	26,751	0.669	C
	Richmar Ave to San Marcos Blvd	Arterial (4)	40,000	28,126	0.703	C
	San Marcos Blvd to SR-78 WB Ramps	Arterial (6)	60,000	39,498	0.658	C
	SR-78 WB Ramps to SR-78 EB Ramps	Arterial (6)	60,000	44,049	0.734	C
Vineyard Road	Borden Rd to Woodward St	Collector (2)	15,000	3,805	0.254	A
Mulberry Drive	Rose Ranch Rd to Borden Rd	Arterial (3)	22,500	3,453	0.153	A
	Borden Rd to Mission Rd	Arterial (4)	30,000	9,347	0.312	A
Mission Road	San Marcos Blvd to Mulberry Dr.	Arterial Enhanced (6)	60,000	20,145	0.336	A
	Mulberry Dr to Mission Hills Ct	Arterial Enhanced (6)	60,000	21,426	0.357	A
	Mission Hills Ct to Woodland Pkwy	Arterial Enhanced (6)	60,000	19,156	0.319	A
San Marcos Boulevard	Twin Oaks Valley Rd. to Rancheros Dr.	Arterial (4)	40,000	22,631	0.566	C
	Rancheros Dr to Mission Rd	Arterial (4)	40,000	15,780	0.395	B
Woodland Parkway	Mission Rd to Rancheros Dr	Arterial (4)	40,000	17,779	0.444	B
Rancheros Drive	SR-78 WB Ramps to Woodland Pkwy	Collector (2)	15,000	**15,926**	**1.062**	**F**

Note: Deficient roadway segment operation shown in **bold**.

Project Trip Generation

To determine the trips forecast to be generated by the proposed project, April 2002 SANDAG Trip Generation rates were utilized in accordance with the City of San Marcos and SANTEC/ITE Traffic Study Guidelines. As shown in **Table 20,** the proposed project will generate a net increase of approximately 1,008 trips per day, which includes approximately 81 a.m. peak hour trips and approximately 101 p.m. peak hour trips.

Table 20. Proposed Project Trip Generation

Land Use	Unit	Daily (per unit)	AM Peak			PM Peak		
			Total	In	Out	Total	In	Out
Condominium	DU	8	8%	20%	80%	10%	70%	30%
Forecast Project Generated Trips								
Land Use	**Size**	**Unit**	**Daily Trips**	**AM Peak**			**PM Peak**	
				Total	**In**	**Out**	**Total**	**In**	**Out**
Condominium	126	DU	1,008	81	16	65	101	71	30
Total Project Trips			**1,008**	**81**	**16**	**65**	**101**	**71**	**30**

Source: SANDAG (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (April 2002).

Existing + Project Conditions Analysis

The existing plus project conditions analysis evaluates the impact of the build-out of the proposed project on the existing roadway network. The addition of project-generated trips is not forecast to result in a change in operating conditions from acceptable to deficient at any of the study intersections. As shown in **Table 21**, consistent with existing conditions, the study intersections are forecast to continue operating at LOS D or better with the addition of traffic generated by the proposed project.

The results of the Existing Plus Project conditions daily roadway segment analysis are presented in **Table 22.** Table 22 shows that consistent with existing conditions, all study roadway segments will continue operating at acceptable LOS (LOS D or better) except for Rancheros Drive from the SR-78 Westbound Ramps to Woodland Parkway, which will continue operating at LOS F under existing plus project conditions. The calculated increase in the volume-to-capacity (v/c) ratio does not exceed the significant impact threshold of 0.020 for daily roadway segment operations; therefore, a significant impact was not identified on the deficient study segment of Rancheros Drive.

Cumulative Conditions – With and Without Project Analysis

To determine the cumulative conditions in the project study area, forecast project traffic associated with City of San Marcos approved or pending projects was added to existing traffic volumes. Sixteen cumulative projects could add traffic to the study area by project opening year (2016). Cumulative project traffic data through the study area is based on information from traffic impact studies. A list of the cumulative project considered in this analysis is included in Appendix I. Cumulative projects are forecast to generate approximately 70,414 trips per day, which includes approximately 5,250 a.m. peak hour trips and approximately 6,837 p.m. peak hour trips.

Table 21. Existing Plus Project Peak Hour Intersection Conditions

Study Intersection	Existing Conditions		Existing + Project		Change in Delay [1]	
	AM Delay[1] LOS	PM Delay[1] LOS	AM Delay[1] LOS	PM Delay[1] LOS	AM	PM
Mulberry Dr / Rose Ranch Rd [2]	10.5 – B	8.8 – A	10.5 – B	8.8 – A	0.0	0.0
Twin Oaks Valley Rd / Borden Rd	47.6 – D	33.6 – C	47.7 – D	33.7 – C	0.1	0.1
Borden Rd / Woodward St	29.5 – C	30.5 – C	29.5 – C	30.5 – C	0.0	0.0
Borden Rd / Vineyard Rd	24.5 – C	26.8 – C	24.5 – C	26.9 – C	0.0	0.1
Borden Rd / Mulberry Dr	34.8 – C	30.1 – C	35.4 – D	30.5 – C	0.6	0.4
Borden Rd / Rose Ranch Rd [2]	24.1 – C	23.4 – C	24.8 – C	24.4 – C	0.7	0.0
Borden Rd / Woodland Pkwy	32.8 – C	30.2 – C	32.9 – C	30.2 – C	0.1	0.0
San Marcos Blvd / Twin Oaks Valley Rd	39.0 – D	44.0 – D	39.2 – D	44.2 – D	0.2	0.2
San Marcos Blvd / Rancheros Dr	19.0 – B	26.9 – C	19.0 – B	26.9 – C	0.0	0.0
San Marcos Blvd / Mission Rd	26.1 – C	28.1 – C	26.9 – C	28.3 – C	0.8	0.2
Mission Rd / Mulberry Dr	30.0 – C	24.1 – C	32.0 – C	25.0 – C	2.0	0.9
Mission Rd / Mission Hills Ct	29.0 – C	15.0 – B	29.0 – C	15.1 – B	0.0	0.1
Mission Rd / Woodland Pkwy	38.7 – D	32.3 – C	38.9 – D	32.5 – C	0.2	0.2
Twin Oaks Valley Rd / SR-78 WB Ramps	18.8 – B	16.4 – B	18.8 – B	16.4 – B	0.0	0.0
Twin Oaks Valley Rd / SR-78 EB Ramps	37.8 – D	28.1 – C	37.9 – D	28.4 – C	0.1	0.3
Rancheros Dr / SR-78 WB Ramps [2]	27.5 – D	20.5 – C	27.5 – D	20.5 – C	0.0	0.0
Woodland Pkwy / Rancheros Dr	30.7 – C	32.2 – C	30.8 – C	32.3 – C	0.1	0.1
Mulberry Dr / Project Driveway [3]	–	–	19.6 – C	11.7 – B	–	–

Note: Deficient intersection operation shown in **bold**. Change in delay shown in **bold** indicates a significant impact.
EB = Eastbound, WB = Westbound
[1] Seconds of delay per vehicle.
[2] Unsignalized, all-way stop controlled intersection.
[3] Unsignalized, minor street stop controlled intersection.

Cumulative Conditions Level of Service Analysis

Intersection Analysis

Table 23 summarizes the Existing Plus Cumulative conditions peak hour intersection analysis using HCM methodology, without and with the proposed project.

As shown in Table 23, the following intersections are forecast to operate at deficient levels of service (LOS E or F) under Existing Plus Cumulative Conditions both without and with the proposed project:

- Twin Oaks Valley Road / Borden Road (a.m.: LOS E)
- Borden Road / Rose Ranch Road (a.m./p.m.: LOS E)
- Twin Oaks Valley Road / SR-78 Eastbound Ramps (a.m.: LOS E)

The addition of project-related traffic to the above-listed deficient intersections does not result in an increase in delay that exceeds the significance threshold of 2.0 seconds. Therefore, no significant impacts are identified at the study intersections under Existing Plus Cumulative conditions with the proposed project and no mitigation measures are required.

Table 22. Existing Plus Project Daily Roadway Segment Conditions

Roadway	Location	Class (# Lanes)	LOS E Capacity	Existing Conditions			Existing + Project			Change in V/C
				ADT	V/C	LOS	ADT	V/C	LOS	
Borden Road	Twin Oaks Valley Rd to Woodward St	Arterial (4)	30,000	8,866	0.296	A	8,987	0.300	A	0.004
	Woodward St to Vineyard Rd	Arterial (4)	30,000	5,358	0.179	A	5,479	0.183	A	0.004
	Vineyard Rd to Mulberry Dr	Arterial (3)	22,500	6,341	0.282	A	6,502	0.289	A	0.007
	Mulberry Dr to Rose Ranch Rd	Collector (2)	15,000	8,443	0.563	C	8,564	0.571	C	0.008
Twin Oaks Valley Road	Borden Rd to Richmar Ave	Arterial (4)	40,000	26,751	0.669	C	26,822	0.671	C	0.002
	Richmar Ave to San Marcos Blvd	Arterial (4)	40,000	28,126	0.703	C	28,197	0.705	C	0.002
	San Marcos Blvd to SR-78 WB Ramps	Arterial (6)	60,000	39,498	0.658	C	39,800	0.663	C	0.005
	SR-78 WB Ramps to SR-78 EB Ramps	Arterial (6)	60,000	44,049	0.734	C	44,230	0.737	C	0.003
Vineyard Road	Borden Rd to Woodward St	Collector (2)	15,000	3,805	0.254	A	3,845	0.256	A	0.003
Mulberry Drive	Rose Ranch Rd to Borden Rd	Arterial (3)	22,500	3,453	0.153	A	3,473	0.154	A	0.001
	Borden Rd to Mission Rd	Arterial (4)	30,000	9,347	0.312	A	10,053	0.335	B	0.024
Mission Road	San Marcos Blvd to Mulberry Dr.	Arterial Enhanced (6)	60,000	20,145	0.336	A	20,528	0.342	A	0.006
	Mulberry Dr to Mission Hills Ct	Arterial Enhanced (6)	60,000	21,426	0.357	A	21,749	0.362	A	0.005
	Mission Hills Ct to Woodland Pkwy	Arterial Enhanced (6)	60,000	19,156	0.319	A	19,458	0.324	A	0.005
San Marcos Boulevard	Twin Oaks Valley Rd. to Rancheros Dr.	Arterial (4)	40,000	22,631	0.566	C	22,954	0.574	C	0.008
	Rancheros Dr to Mission Rd	Arterial (4)	40,000	15,780	0.395	B	16,103	0.403	B	0.008
Woodland Parkway	Mission Rd to Rancheros Dr	Arterial (4)	40,000	17,779	0.444	B	18,001	0.450	B	0.006
Rancheros Drive	SR-78 WB Ramps to Woodland Pkwy	Collector (2)	15,000	**15,926**	**1.062**	**F**	**16,007**	**1.067**	**F**	0.005

Note: Deficient roadway segment operation shown in **bold**.

Table 23. Existing Plus Cumulative Peak Hour Intersection Conditions - Without and With Project

Study Intersection	Without Project		With Project		Change in Delay [1]	
	AM Delay [1] LOS	PM Delay [1] LOS	AM Delay [1] LOS	PM Delay [1] LOS	AM	PM
Mulberry Dr / Rose Ranch Rd [2]	10.6 – B	8.8 – A	10.6 – B	8.8 – A	0.0	0.0
Twin Oaks Valley Rd / Borden Rd	**60.9 – E**	36.2 – D	**61.2 – E**	36.3 – D	0.3	0.1
Borden Rd / Woodward St	29.3 – C	30.2 – C	29.3 – C	30.2 – C	0.0	0.0
Borden Rd / Vineyard Rd	24.4 – C	26.3 – C	24.4 – C	26.3 – C	0.0	0.0
Borden Rd / Mulberry Dr	36.6 – D	32.1 – C	37.2 – D	32.6 – C	0.6	0.5
Borden Rd / Rose Ranch Rd [2]	**44.6 – E**	**42.0 – E**	**45.9 – E**	**43.9 – E**	1.3	1.9
Borden Rd / Woodland Pkwy	34.2 – C	32.9 – C	34.2 – C	33.0 – C	0.0	0.1
San Marcos Blvd / Twin Oaks Valley Rd	48.7 – D	52.4 – D	49.5 – D	52.8 – D	0.8	0.4
San Marcos Blvd / Rancheros Dr	19.6 – B	27.6 – C	19.6 – B	27.6 – C	0.0	0.0
San Marcos Blvd / Mission Rd	27.7 – C	28.7 – C	27.8 – C	28.9 – C	0.1	0.2
Mission Rd / Mulberry Dr	36.0 – D	26.3 – C	39.8 – D	27.4 – C	3.8	1.1
Mission Rd / Mission Hills Ct	28.8 – C	14.7 – B	28.8 – C	14.7 – B	0.0	0.0
Mission Rd / Woodland Pkwy	41.0 – D	33.5 – C	41.2 – D	33.8 – C	0.2	0.3
Twin Oaks Valley Rd / SR-78 WB Ramps	21.5 – C	20.9 – C	21.5 – C	20.9 – C	0.0	0.0
Twin Oaks Valley Rd / SR-78 EB Ramps	**55.7 – E**	45.7 – D	**55.7 – E**	46.1 – D	0.0	0.4
Rancheros Dr / SR-78 WB Ramps [2]	31.2 – D	31.9 – D	31.2 – D	31.9 – D	0.0	0.0
Woodland Pkwy / Rancheros Dr	45.4 – D	38.1 – D	45.9 – D	38.4 – D	0.5	0.3
Mulberry Dr / Project Driveway [3]	–	–	21.6 – C	12.3 – B	–	–

Note: Deficient intersection operation shown in **bold**.
[1] Seconds of delay per vehicle.
[2] Unsignalized, all-way stop controlled intersection.
[3] Unsignalized, minor street stop controlled intersection.

Roadway Segment Analysis

Daily roadway segment levels of service were calculated based on the roadway classification and capacity as well as ADT volumes. **Table 24** presents the results of the Existing Plus Cumulative conditions roadway segment LOS analysis, without and with the proposed project. As shown in Table 24, Rancheros Drive from SR-78 Westbound Ramps to Woodland Parkway is forecast to operate at LOS F under Existing Plus Cumulative conditions without and with the proposed project.

The addition of project-related traffic results in a change in v/c that is less than the significant impact threshold of 0.020; therefore, a significant impact was not identified on the deficient study segment of Rancheros Drive.

Horizon Year 2035 Conditions – With and Without Project

The SANDAG Series 11 North San Diego County Sub-Area traffic model for the year 2030 was used to evaluate the 2035 Horizon Year conditions. The Series 11 model used to generate the forecast 2035 volumes includes traffic from several large-scale projects planned in the City such as the University District, Creek District, and Rancho Coronado (Hanson site). The forecast Series 11 2030 traffic volumes were compared to the Series 12 regional model for year 2035, and it was revealed that the Series 11 model provides a more conservative and accurate analysis of Horizon Year 2035 conditions.

Table 24. Existing Plus Cumulative Daily Roadway Segment Conditions - Without and With Project

Roadway	Location	Class (# Lanes)	LOS E Capacity	Without Project			With Project			Change in V/C
				ADT	V/C	LOS	ADT	V/C	LOS	
Borden Road	Twin Oaks Valley Rd to Woodward St	Arterial (4)	30,000	9,798	0.327	A	9,919	0.331	A	0.004
	Woodward St to Vineyard Rd	Arterial (4)	30,000	6,215	0.207	A	6,336	0.211	A	0.004
	Vineyard Rd to Mulberry Dr	Arterial (3)	22,500	7,174	0.319	A	7,335	0.326	A	0.007
	Mulberry Dr to Rose Ranch Rd	Collector (2)	15,000	10,006	0.667	D	10,127	0.675	D	0.008
Twin Oaks Valley Road	Borden Rd to Richmar Ave	Arterial (4)	40,000	29,485	0.737	C	29,556	0.739	C	0.002
	Richmar Ave to San Marcos Blvd	Arterial (4)	40,000	30,488	0.762	D	30,558	0.764	D	0.002
	San Marcos Blvd to SR-78 WB Ramps	Arterial (6)	60,000	45,128	0.752	C	45,430	0.757	C	0.005
	SR-78 WB Ramps to SR-78 EB Ramps	Arterial (6)	60,000	52,704	0.878	D	52,886	0.881	D	0.003
Vineyard Road	Borden Rd to Woodward St	Collector (2)	15,000	4,213	0.281	A	4,253	0.284	A	0.003
Mulberry Drive	Rose Ranch Rd to Borden Rd	Arterial (3)	22,500	3,637	0.162	A	3,657	0.163	A	0.001
	Borden Rd to Mission Rd	Arterial (4)	30,000	10,462	0.349	B	11,168	0.372	B	0.024
Mission Road	San Marcos Blvd to Mulberry Dr.	Arterial Enhanced (6)	60,000	22,688	0.378	A	23,071	0.385	A	0.006
	Mulberry Dr to Mission Hills Ct	Arterial Enhanced (6)	60,000	23,142	0.386	A	23,464	0.391	A	0.005
	Mission Hills Ct to Woodland Pkwy	Arterial Enhanced (6)	60,000	20,825	0.347	A	21,127	0.352	A	0.005
San Marcos Boulevard	Twin Oaks Valley Rd. to Rancheros Dr.	Arterial (4)	40,000	24,754	0.619	C	25,077	0.627	C	0.008
	Rancheros Dr to Mission Rd	Arterial (4)	40,000	17,308	0.433	B	17,631	0.441	B	0.008
Woodland Parkway	Mission Rd to Rancheros Dr	Arterial (4)	40,000	20,391	0.510	B	20,613	0.515	B	0.006
Rancheros Drive	SR-78 WB Ramps to Woodland Pkwy	Collector (2)	15,000	**19,602**	**1.307**	**F**	**19,683**	**1.312**	**F**	0.005

Note: Deficient roadway segment operation shown in **bold**.

The forecast Horizon Year 2035 daily volumes were post-processed by RBF to develop peak hour intersection volumes. The Horizon Year 2035 peak hour volumes were generated using the forecast growth from existing conditions to 2035. Adjustments were made where appropriate to reflect changes in traffic patterns and growth for all study intersections.

The Horizon Year 2035 traffic model includes the following planned roadway improvements within the project study area:

- Widening of Borden Road to four lanes from Vineyard Drive to Woodland Parkway
- Widening of Woodland Parkway to four lanes from Rancheros Drive to Barham Drive
- Widening of Rancheros Drive to four lanes from SR-78 Westbound Ramps to Woodland Parkway
- Intersection improvements at Woodland Parkway/Rancheros Drive and at Rancheros Drive/SR-78 Westbound Ramps (as part of SR-78/Barham-Woodland interchange improvements)
- Installation of traffic signal at Rancheros Drive/SR-78 Westbound Ramps
- Extension of Richmar Avenue from Twin Oaks Valley Road to Woodward Street

Horizon Year 2035 Conditions Level of Service Analysis

Intersection Analysis

The results of the Horizon Year 2035 intersection LOS analysis are summarized in **Table 25.**

Table 25. Horizon Year 2035 Peak Hour Intersection Conditions - Without and With Project

Intersection	Without Project		With Project		Change in Delay [1]	
	AM Delay[1] LOS	PM Delay[1] LOS	AM Delay[1] LOS	PM Delay[1] LOS	AM	PM
Mulberry Dr / Rose Ranch Rd [2]	12.2 – B	9.5 – A	12.2 – B	9.5 – A	0.0	0.0
Twin Oaks Valley Rd / Borden Rd	**85.2 – F**	50.6 – D	**85.5 – F**	50.7 – D	0.3	0.1
Borden Rd / Woodward St	27.8 – C	28.4 – C	27.8 – C	28.4 – C	0.0	0.0
Borden Rd / Vineyard Rd	21.8 – C	25.7 – C	21.9 – C	25.8 – C	0.1	0.1
Borden Rd / Mulberry Dr	36.4 – D	34.4 – C	36.9 – D	35.0 – D	0.5	0.6
Borden Rd / Rose Ranch Rd [2]	22.5 – C	19.2 – C	22.7 – C	19.5 – C	0.2	0.3
Borden Rd / Woodland Pkwy	34.6 – C	38.3 – D	34.6 – C	38.3 – D	0.0	0.0
San Marcos Blvd / Twin Oaks Valley Rd	**67.1 – E**	**69.3 – E**	**68.5 – E**	**70.0 – E**	1.4	0.7
San Marcos Blvd / Rancheros Dr	20.2 – C	30.3 – C	20.2 – C	30.4 – C	0.0	0.1
San Marcos Blvd / Mission Rd	27.6 – C	30.2 – C	27.7 – C	30.4 – C	0.1	0.2
Mission Rd / Mulberry Dr	30.6 – C	28.6 – C	32.2 – C	30.4 – C	1.6	1.8
Mission Rd / Mission Hills Ct	27.2 – C	15.0 – B	27.2 – C	15.1 – B	0.0	0.1
Mission Rd / Woodland Pkwy	42.9 – D	37.8 – D	43.2 – D	38.0 – D	0.3	0.2
Twin Oaks Valley Rd / SR-78 WB Ramps	27.1 – C	35.3 – D	27.1 – C	35.3 – D	0.0	0.0
Twin Oaks Valley Rd / SR-78 EB Ramps	**94.1 – F**	**76.0 – E**	**94.1 – F**	**76.4 – E**	0.0	0.4
Rancheros Dr / SR-78 WB Ramps [3]	26.7 – C	36.8 – D	26.7 – C	37.3 – D	0.0	0.5
Woodland Pkwy / Rancheros Dr	30.3 – C	30.5 – C	30.4 – C	30.7 – C	0.1	0.2
Mulberry Dr / Project Driveway [4]	–	–	21.1 – C	13.7 – B	–	–

Note: Deficient intersection operation shown in **bold**. Change in delay shown in **bold** indicates a significant impact.
EB = Eastbound, WB = Westbound
[1] Seconds of delay per vehicle.
[2] Unsignalized, all-way stop controlled intersection.
[3] Intersection is assumed to be signalized per the planned SR-78@Barham/Woodland interchange improvements.
[4] Unsignalized, minor street stop controlled intersection.

As shown in Table 25, the following intersections are forecast to operate at deficient LOS (LOS E or F) under Horizon Year 2035 Conditions both without and with the proposed project:

- Twin Oaks Valley Road / Borden Road (a.m.: LOS F)
- San Marcos Boulevard / Twin Oaks Valley Road (a.m./p.m.: LOS E)
- Twin Oaks Valley Road / SR-78 Eastbound Ramps (a.m.: LOS F; p.m.: LOS E)

The addition of project-related traffic to the above-listed deficient intersections does not result in an increase in delay that exceeds the significance threshold of 2.0 seconds. Therefore, no significant impacts are identified at the study intersections under Horizon Year 2035 Conditions and no mitigation measures are required.

Roadway Segment Analysis

Daily roadway segment LOS were calculated based on the roadway classification and capacity as well as ADT volumes. **Table 26** presents the results of the Horizon Year 2035 Conditions roadway segment LOS analysis, without and with the proposed project.

As shown in **Table 26**, Twin Oaks Valley Road from SR-78 Westbound Ramps to SR-78 Eastbound Ramps is forecast to operate at LOS E under Horizon Year 2035 conditions without and with the proposed project. The addition of project-related traffic results in a change in v/c that is less than the significant impact threshold of 0.020; therefore, a significant impact was not identified on the study segment of Twin Oaks Valley Road.

Site Access and Internal Circulation

The proposed Mulberry residential project will take access from one driveway along Mulberry Street located approximately 500 feet south of Borden Road. Restricted access for emergency vehicles will also be provided from Borden Circle near the southwest corner of the project site.

The project driveway intersection on Mulberry Street will be controlled by a stop sign at the minor street (eastbound) approach. Left-turn access from northbound Mulberry Street will be provided from the existing two-way left-turn lane.

Based on the results of the HCM intersection analysis, the proposed driveway intersection is forecast to operate acceptable LOS (LOS D or better) during the peak hours through the year 2035. Therefore, no operational impacts are anticipated for the proposed driveway intersection.

Along the east side of Mulberry Street across from the project site are two existing uses that consider discussion in this report. The first use is Mission Hills Church, which is located at the southeast corner of the intersection of Borden Road / Mulberry Street. Mission Hills Church takes access from Borden Road approximately 1,000 feet east of Mulberry Street, and access is also provided from Mission Hills Court off of Mission Road. Approximately 1,400 people attend services on a typical Sunday, and church-related traffic is known to be relatively heavy entering and exiting the church driveway on Borden Road between service times on Sunday mornings. However, based on our professional experience with Sunday traffic conditions, a supplemental Sunday morning analysis was not included for the following reasons:

- Aside from the church traffic, background traffic on a Sunday is typically the lowest of any day of the week.

- Although Sunday church-related traffic may be relatively heavy for brief periods near the intersection of Borden Road / Mulberry Street, it is highly unlikely that the church at peak times generates traffic that meets or exceeds the levels of traffic during the weekday a.m. and p.m. peak hours.

- As the project site is located across the street from the church, potential new church patrons from the project are more likely to walk the short distance to and from the church instead of attempting to drive and park in the congested parking lot during peak Sunday service times.

- The project driveway on Mulberry Street is located over 1,500 feet from the primary church driveway on Borden Road; therefore, no direct operational impacts associated with the church are anticipated at the project driveway location.

The second use along Mulberry Street that considers discussion is the existing Hollandia Dairy facility. Hollandia Dairy produces milk and by-products and delivers these dairy products to businesses all over San Diego County and Orange County, as well as portions of Los Angeles, Riverside and San Bernardino Counties. Buildings on the site have a combined square-footage of approximately 100,000 square-feet, which include a creamery and office, storage, and wastewater facilities. The site is best described as an industrial facility, although some of the facilities are more related to warehousing and storage. The site is zoned for light industrial use according to the City's Zoning Code and General Plan. Based on the use and size of the site, the Hollandia Dairy facility generates trips ranging from 400 to 800 trips per day depending on which SANDAG trip rate is used. The trips generated by the site are a combination of employee trips and trucking/delivery trips.

The main employee entrance to the Hollandia Dairy site is located on Mission Road while the trucking/delivery entrance is located on Mulberry Street. This Hollandia Dairy trucking driveway is located approximately 460 feet south of the proposed Mulberry project driveway. Based on the estimated number of trips and the distance between the driveways, no operational or safety issues are anticipated between the existing Hollandia Dairy traffic and the traffic generated by the proposed project.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? Less Than Significant Impact

Peak Hour Freeway Ramp Metering Analysis

Freeway ramp meters are currently operating at the northbound to westbound SR-78 on-ramp at Twin Oaks Valley Road, the southbound to westbound SR-78 on-ramp at Twin Oaks Valley Road, the eastbound SR-78 on-ramp at Twin Oaks Valley Road, and the westbound SR-78 on-ramp at Rancheros Drive (Barham Drive/Woodland Parkway interchange). The northbound to westbound SR-78 on-ramp at Twin Oaks Valley Road is not included in this analysis because trips associated with the proposed project would not be added to this on-ramp.

Table 26. Horizon Year 2035 Daily Roadway Segment Conditions - Without and With Project

Roadway	Location	Class (# Lanes)	LOS E Capacity	Without Project			With Project			Change in V/C
				ADT	V/C	LOS	ADT	V/C	LOS	
Borden Road	Twin Oaks Valley Rd to Woodward St	Arterial (4)	30,000	17,500	0.583	C	17,621	0.587	C	0.004
	Woodward St to Vineyard Rd	Arterial (4)	30,000	12,100	0.403	B	12,221	0.407	B	0.004
	Vineyard Rd to Mulberry Dr	Arterial (3)	22,500	13,000	0.433	B	13,161	0.439	B	0.005
	Mulberry Dr to Rose Ranch Rd	Collector (2)	15,000	12,500	0.417	B	12,621	0.421	B	0.004
Twin Oaks Valley Road	Borden Rd to Richmar Ave	Arterial (4)	40,000	30,200	0.755	D	30,271	0.757	D	0.002
	Richmar Ave to San Marcos Blvd	Arterial (4)	40,000	33,500	0.838	D	33,571	0.839	D	0.002
	San Marcos Blvd to SR-78 WB Ramps	Arterial (6)	60,000	49,600	0.827	C	49,902	0.832	C	0.005
	SR-78 WB Ramps to SR-78 EB Ramps	Arterial (6)	60,000	**55,300**	**0.922**	**E**	**55,481**	**0.925**	**E**	0.003
Vineyard Road	Borden Rd to Woodward St	Collector (2)	15,000	3,500	0.233	A	3,540	0.236	A	0.003
Mulberry Drive	Rose Ranch Rd to Borden Rd	Arterial (3)	22,500	5,400	0.240	A	5,420	0.241	A	0.001
	Borden Rd to Mission Rd	Arterial (4)	30,000	11,500	0.383	B	12,206	0.407	B	0.024
Mission Road	San Marcos Blvd to Mulberry Dr.	Arterial Enhanced (6)	60,000	30,900	0.515	B	31,283	0.521	B	0.006
	Mulberry Dr to Mission Hills Ct	Arterial Enhanced (6)	60,000	27,200	0.453	B	27,523	0.459	B	0.005
	Mission Hills Ct to Woodland Pkwy	Arterial Enhanced (6)	60,000	25,900	0.432	B	26,202	0.437	B	0.005
San Marcos Boulevard	Twin Oaks Valley Rd. to Rancheros Dr.	Arterial (4)	40,000	27,200	0.680	C	27,523	0.688	C	0.008
	Rancheros Dr to Mission Rd	Arterial (4)	40,000	18,900	0.473	B	19,223	0.481	B	0.008
Woodland Parkway	Mission Rd to Rancheros Dr	Arterial (4)	40,000	29,300	0.733	C	29,522	0.738	C	0.006
Rancheros Drive	SR-78 WB Ramps to Woodland Pkwy	Arterial (4)	30,000	20,100	0.670	D	20,181	0.673	D	0.003

Note: Deficient roadway segment operation shown in **bold**.

The southbound to westbound SR-78 on-ramp at Twin Oaks Valley Road has ramp meters operating during the a.m. peak period from 5:30 a.m. to 9:30 a.m. Ramp meters are currently operating during the p.m. peak period from 3:30 p.m. to 7:00 p.m. at the eastbound SR-78 on-ramp at Twin Oaks Valley Road. At the westbound SR-78 on-ramp at Rancheros Drive, ramp meters are currently operating during the a.m. peak period from 5:30 a.m. to 9:30 a.m.

The existing lane configurations and meter flow rates for each study area freeway on-ramp are provided below:

Twin Oaks Valley Road Westbound On-Ramp from SB Approach (a.m. peak metering)

- 1 single-occupancy vehicle (SOV) lane
- 1 high-occupancy vehicle (HOV) lane
- Meter flow rate: 570 vehicles per hour per lane (1 car per green)

Twin Oaks Valley Road Eastbound On-Ramp (p.m. peak metering)

- 2 single-occupancy vehicle (SOV) lanes
- 1 high-occupancy vehicle (HOV) lane
- Meter flow rate: 570 vehicles per hour per lane (1 car per green)

Barham Drive/Woodland Parkway (Rancheros Drive) Westbound On-Ramp (a.m. peak metering)

- 1 single-occupancy vehicle (SOV) lane
- 1 high-occupancy vehicle (HOV) lane
- Meter flow rate: 570 vehicles per hour per lane (1 car per green)

Improvements are planned at the Barham Drive/Woodland Parkway interchange prior to 2035 and will provide 2 SOV lanes and 1 HOV lane on the westbound on-ramp. Therefore, the Horizon Year 2035 analysis assumes these improvements are completed. The results of the ramp metering analysis for all study scenarios are summarized in **Table 27**.

It is assumed that the current hourly ramp meter flow rate will be maintained in the future study scenarios. Table 27 shows that under Existing Plus Cumulative conditions, the p.m. peak hour demand at the Twin Oaks Valley Road Eastbound On-Ramp and the a.m. peak hour demand at Rancheros Drive Westbound On-Ramp are forecast to exceed the current hourly meter flow rate capacities both without and with the proposed project. The forecast ramp meter delay is less than 15 minutes and therefore is not considered deficient.

The results of the Horizon Year 2030 Conditions ramp meter analysis show that the p.m. peak hour demand at the Twin Oaks Valley Road Eastbound On-Ramp is forecast to exceed the current hourly meter flow rate capacities both without and with the proposed project. The forecast ramp meter delay under Horizon Year 2035 conditions is more than 15 minutes and therefore is considered deficient. The proposed project is not forecast to add any new trips to the deficient on-ramp; therefore, no ramp meter impacts are identified under Horizon Year 2035 conditions. Impacts would be less than significant.

Table 27. Peak Hour Freeway Ramp Metering Analysis

Ramp	Peak Hour	Demand (Ramp Volume)	Meter Flow Rate [1]	Number of Lanes [2]	Excess Demand	Delay (Minutes)	Queue Length (in feet)
Existing Conditions							
TOVR WB On-Ramp	AM	378	570	1.1	0	0	0
TOVR EB On-Ramp	PM	1054	570	2.2	0	0	0
Rancheros Dr WB On-Ramp	AM	569	570	1.1	0	0	0
Existing Plus Project Conditions							
TOVR WB On-Ramp	AM	391	570	1.1	0	0	0
TOVR EB On-Ramp	PM	1054	570	2.2	0	0	0
Rancheros Dr WB On-Ramp	AM	569	570	1.1	0	0	0
Existing Plus Cumulative Conditions Without Project							
TOVR WB On-Ramp	AM	393	570	1.1	0	0	0
TOVR EB On-Ramp	PM	1,364	570	2.2	44	5	1,095
Rancheros Dr WB On-Ramp	AM	647	570	1.1	12	1	308
Existing Plus Cumulative Conditions With Project							
TOVR WB On-Ramp	AM	391	570	1.1	0	0	0
TOVR EB On-Ramp	PM	1,364	570	2.2	44	5	1,095
Rancheros Dr WB On-Ramp	AM	647	570	1.1	12	1	308
Horizon Year 2035 Conditions Without Project							
TOVR WB On-Ramp	AM	417	570	1.1	0	0	0
TOVR EB On-Ramp	PM	1,626	570	2.2	162	17	4,043
Rancheros Dr WB On-Ramp	AM	799	570	2.2	0	0	0
Horizon Year 2035 Conditions With Project							
TOVR WB On-Ramp	AM	430	570	1.1	0	0	0
TOVR EB On-Ramp	PM	1,626	570	2.2	162	17	4,043
Rancheros Dr WB On-Ramp	AM	799	570	2.2	0	0	0

Notes: [1] Vehicles per hour per lane.

[2] Previous studies have shown that HOV lanes are utilized by approximately 10% of the total freeway traffic during the peak hours. The capacity of the SOV and HOV lanes on the ramps were calculated based on the proportion of traffic using each lane.

Construction Truck Traffic Evaluation

This section evaluates the construction truck materials import activities and the trips associated with the grading of the proposed project site. The purpose of this evaluation is to determine if the estimated truck trips associated with the material import activities would potentially result in traffic impacts during the peak hours.

According to the information provided to RBF, grading operation associated with the project includes a total of 33,425 cubic yards (cy) of cut, 77,358 cy of fill, and 43,993 cy of earthwork materials to be imported to the site. The estimated duration of materials import is 45 days.

Based on the information described above, **Table 28** presents a summary of the truck import activities.

Table 28. Summary of Construction Truck Import Activities

Project Duration (Days)	Total Cubic Yards	Cubic Yards Per Day	Loads Per Day (1)	Loads Per Hour (2)	Truck Trips Per Day	Truck Trips Per Hour
45	43,993	978	65	7	130	14

Notes: (1) Calculation is based on a truck capacity of 15 cubic yards per load.
(2) Hourly loads is based on truck hauling operations occurring for 9 hours each day, assuming a schedule from 7:00 a.m. to 5:00 p.m. with a one-hour lunch.

As shown in Table 28, it is estimated that approximately 978 cy of material per day would be imported to the site. Assuming a truck capacity of 15 cy per load, approximately 65 loads per day would be imported to the project site. Assuming each load results in one inbound and one outbound truck trip, it is estimated a total of 130 truck trips per day would occur.

The materials import operation would take place on weekdays from Monday through Friday. Trucks are assumed to enter the site at approximately 7:00 a.m., and the last trucks are expected to exit the site by approximately 5:00 p.m. It is assumed that truck hauling activities would occur for nine hours each day, with one hour off for a lunch break. Based on the hours of operation and the estimated number of daily truck trips (130), it is estimated that approximately 14 truck trips per hour would occur. It is assumed that truck trips per hour would remain constant throughout the day with the exception of a one hour lunch break.

Since trucks tend to have a more significant effect on roadway operations when compared to passenger vehicles, passenger car equivalency factors (PCEs) were applied to convert truck traffic to passenger vehicle equivalents. As specified in the Highway Capacity Manual (HCM) 2000, heavy, multi-axle trucks should use a PCE factor of 2.0. Therefore, the project truck trips calculated in this analysis were multiplied by 2.0 to derive traffic levels in PCEs.

Table 29 summarizes the estimated total daily and hourly trip generation associated with the truck import activities, which includes the PCE factor described above. As shown in Table 14, the truck hauling activities would generate a total of 260 truck PCE trips per day, with 28 truck PCE trips occurring during the a.m. peak hour and 28 truck PCE trips occurring during the p.m. peak hour.

Table 29. Truck Import Activities PCE Trip Generation

Trip Type	Daily Trips	AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out
PCE Truck Trips *	260	28	14	14	28	14	14

*Passenger Car Equivalency (PCE) factor of 2.0 applied to the truck trips.

Truck trips associated with the materials import activities will arrive to the site either from the intersection of Mission Road / Mulberry Drive or from the intersection of Borden Road / Mulberry Drive. The findings of the existing plus project analysis presented earlier in this report showed that both of these intersections, and all study intersections, are forecast to operate at acceptable levels of service (LOS D or better) during the peak hours.

The proposed 126 condominiums are forecast to generate approximately 81 a.m. peak hour trips and approximately 101 p.m. peak hour trips. The estimated number of truck PCE trips is only 28 trips during the peak hours, which is significantly less than the trips generated by the project when

completed. In conclusion, since the study intersections will operate at LOS D or better under existing plus project conditions, construction truck traffic impacts associated with the truck import activities are expected to be less than significant during the peak hours or any other time throughout the day.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? No Impact

The project site is located approximately 7 miles east of McClellan-Palomar Airport. Given the type of development proposed (mixed use of residential and commercial), as well as the project's distance from the airport, the project will not result in a change in air traffic patterns. Therefore, no impacts are identified for this issue area.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? No Impact

The proposed Mulberry residential project will take access from one driveway along Mulberry Street located approximately 500 feet south of Borden Road. The project driveway intersection on Mulberry Street will be controlled by a stop sign at the minor street (eastbound) approach. Left-turn access from northbound Mulberry Street will be provided from the existing two-way left-turn lane. The project does not result in a substantial increase in hazards due to design features or incompatible uses and no impacts are identified for this issue area.

e) Result in inadequate emergency access? Less Than Significant Impact

The project provides adequate emergency access. Street widths meet the requirements of the San Marcos Fire Department and there are multiple entry points into the residential community. Construction of the proposed project will not result in the closure of any roads that would impede emergency access. Therefore, impacts are less than significant.

f) Result in inadequate parking capacity? Less Than Significant Impact

Each residential unit in the project will have a two-car garage. Additionally, the Specific Plan mandates one guest parking space for every three dwelling units, which would require a minimum of 42 guest parking spaces. As currently designed, there are 48 guest spaces available. Therefore, adequate parking is proposed as part of the project and impacts are less than significant.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? No Impact

Existing and Future Bicycle and Pedestrian Access

There are currently Class II bike lanes in each direction of travel on Mulberry Drive from Borden Road to Mission Road and along the project frontage. From Mission Road, cyclists can access the Class I Inland Rail Trail bike path that currently extends from the intersection of Mission Road / Pacific Street to I-15 in Escondido. The project would retain the bike lane along Mulberry Drive in front of the project site and would not result in any impact to bicyclists.

There are currently sidewalks on both sides of Mulberry Drive between Borden Road and Mission Road. From the project site, existing sidewalks provide pedestrian access to both Borden Road and

Mission Road. The project would retain the sidewalk along the project frontage and would not result in any impacts to pedestrians.

Transit Access

There is currently one bus stop provided in each direction of travel on Mission Road near the intersection with Mulberry Drive that is within walking distance (1/4 mile or less) of the proposed project site. The bus stop serves North County Transit District (NCTD) Route 305, which extends from the Vista Transit Center to the Escondido Transit Center via South Santa Fe Avenue and Mission Road. Route 305 provides service from 4:15 a.m. to 11:45 p.m. Monday through Friday, with headways every 30 minutes through most of the day.

The proposed project does not conflict with any plans, policies, or programs supporting alternative transportation. Therefore, no impact is identified for this issue area.

XVII. UTILITIES AND SERVICE SYSTEMS

A Water and Sewer Study was prepared for the project by Vallecitos Water District (2014). The complete report is included as **Appendix J** of this document.

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? Less Than Significant Impact

The project will not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. Impacts are less than significant.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. Less Than Significant Impact

Water Facilities Analysis

Water Distribution Infrastructure Analysis – The project is within the boundaries of the Vallecitos Water District (VWD) for water service. The project lies completely within VWD's 920 Pressure Zone. The project will connect to existing VWD facilities. The water model results concluded that the project would not create any new distribution system deficiencies. System deficiencies did appear under maximum day plus fire flow demand conditions at the Mulberry Drive connection point. To avoid this deficiency, the project will upsize approximately 465 feet of 6-inch diameter pipe in Mulberry Drive to an 8-inch diameter pipe.

Water modeling prepared by VWD focused on the infrastructure in the direct vicinity of the proposed project. Under average day demand, maximum day demand and peak hour demand conditions, the model determined that the project would not require creation of any new distribution facilities. System deficiencies were identified under maximum day plus fire flow demand conditions on the Mulberry Drive connection point. To reduce this deficiency, the project will be required to upsize approximately 465 feet of an existing 6-inch diameter water main to an 8-inch diameter main. This improvement is identified as a project design feature (Table 1). With the upgrade, the maximum day plus fire flow demand conditions will be met at the Mulberry connection point. The proposed water line upgrade is located within the roadway and is in an area that is already disturbed, thus no environmental impacts associated with this upgrade are identified.

Water Storage Analysis **-** Based upon the Water and Sewer Study prepared for the project (VWD 2014a) the project will increase water demand. Under the current allowable use in the 2008 VWD Master Plan (light industrial) the site would have a water demand of 17,766 gallons per day (gpd). Under the proposed development, the project would have a water demand of 32,571 gpd. This represents an increase of approximately 14,805 gpd.

Potable water storage within VWD is sized for operational, emergency, and fire flow storage. This increase in water demand will result in increase of potable water storage demand capacity by 74,025 gallons. The project will pay Water Capital Facility Fees per VWD Ordinance No. 175. This requirement is also noted in Table 1. These fees will be used by VWD to expand water storage facilities, as needed, within their service area. VWD considers payment of the Water Capital Facility Fees as mitigation for the increase in water storage demand. Therefore, impacts are less than significant.

Water Pump Station Analysis **-** Based upon the Water and Sewer Study for the project (VWD 2014a) pump stations are sized to supply minimum day flows while meeting all pressure criteria within their service area. Since the proposed project is located in a pressure zone that is not served by pumping, there are no pump station requirements for the project. Thus, no impact is identified related to water pump stations.

Wastewater Facilities Analysis

The project site is within the boundaries of VWD for sewer service and lies completely within VWD sewer shed 24C. There is an 8-inch gravity main in Mulberry Drive.

Based upon the Water and Sewer Study prepared for the project (VWD 2014a) the project will increase wastewater flows. Under the current allowable use in the 2008 VWD Master Plan (light industrial) the site would have an expected wastewater flow of 14,805 gpd. Under the proposed development, the project would have a wastewater flow of 24,675. This represents an increase in wastewater flows of approximately 9,870 gpd.

Wastewater Collection System Analysis **-** The Water and Sewer Study (VWD 2014a) concluded that the increased generation of wastewater from the project would result in a deficient condition for the existing 8-inch collection pipeline in Mission Road from approximately 59 feet west of Mulberry Drive to a VWD easement running north/south approximately, 1,538 feet west from the starting point near Mulberry Drive. However, based upon correspondence from VWD (2014b), because of the built out condition of the sewer shed, the increase in peak flow/pipe diameter ratios caused by the project and identified in the Water and Sewer Study are minimal and there is not a need to replace or upsize the sewer main in Mission Drive. Therefore, impacts will be less than significant. ~~To reduce this deficiency, the project will be required to upsize this pipeline segment from an 8-inch diameter pipe to a 10-inch diameter pipe (Table 1). With the upgrade, the identified deficiency will be corrected and impacts would be less than significant.~~

Wastewater Lift Station Analysis **-** Lift stations are sized for peak wet weather flow. Since the project site is not located in a sewer shed that is served by a lift station (Lift Station No. 1 is a stripping station and does not meet this definition) or requires a lift station, there are no lift station upgrade requirements for the project. Thus no impact is identified.

***Parallel Land Outfall Analysis* -** VWD's existing outfall is approximately eight miles in length and consists of four gravity pipeline sections and three siphon sections varying from 20 to 54 inches. VWD maintains the entire pipeline from Lift Station No. 1 to the Encina Pollution Control Facility (EWPCF).

VWD is currently considering two scenarios for increasing wastewater flows from planned developments within their service area. The first option is constructing a peak flow storage area near Lift Station No. 1. The second option is to convey peak flows to the EWPCF through a parallel land outfall.

The project will pay Wastewater Capital Facility Fees per VWD Ordinance No. 176 and Wastewater Density Impact Fees per VWD Ordinance 177. This requirement is also noted in Table 1. These fees will be used by VWD to help fund the parallel land outfall expansion. VWD considers payment of the fees as mitigation for the increase in the need for land outfall capacity. Therefore, impacts are less than significant.

***Wastewater Treatment Facility Analysis* -** VWD uses two wastewater treatment facilities to treat wastewater that is collected within its sewer service area: the MRF and the EWPCF. The project will increase the wastewater flows from the project site by approximately 9,870 gpd. VWD is already projected to experience ultimate solids handling, liquids handling and ocean disposal capacity deficiencies.

The project will pay Wastewater Capital Facility Fees per VWD Ordinance No. 176 and Wastewater Density Impact Fees per VWD Ordinance 177. This requirement is also noted in Table 1. These fees will be used by VWD to help fund the expansion and/or construction of wastewater treatment facilities to handle increase wastewater quantities. VWD considers payment of the fees as mitigation for the increase in treatment need. Therefore, impacts are less than significant

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? Less Than Significant Impact

The site is currently vacant covering an area of about 10 acres. The property fronts Mulberry Drive on the east. Adjacent north and west are single family homes. To the south are commercial developments. The site is a natural drainage sump for the surrounding areas. The land along the west and north as well as Mulberry Drive are above the subject site.

At the northwest corner of the site is a storm drain outfall. The outfall structure consists of two 36-inch RCP pipes and one 78-inch pipe with a head wall anchoring all three pipes. The pipes drain from underneath Mulberry Drive. The runoff comes from drainage basins to the northeast of the site. Storm runoff exits the pipes over a rip rap energy dissipater onto the subject site. Flows fan out and has not caused or created any appreciable channel.

Along the northerly boundary, more or less in the center of the property line, a 36 inch storm pipe, drains the area to the north.

Along the west boundary is a manufactured slope placing the adjacent development 15 to 25 feet above the subject site. A significant portion of the street and homes, above, drain onto the site either by overland flow, drainage ditches, and one storm drain box collecting run off from the street above. Water concentrates and exits the property at the southerly boundary.

At the southerly boundary is a 33-inch pipe. The pipe was installed apparently to handle low flow conditions. Immediately west of the 33-inch pipe is a soft bottom drainage channel apparently constructed to handle larger events. The channel, located at a low point on the southerly property line, consists of dirt berms approximately 3 to 4 feet high. The channel is not well defined at ground level but is quite prominent from the aerial topography prepared for this project. The majority of the water exits the site by overland flow and drains south into a triple box culvert on the north side of Mission Road. The box culvert drains under Mission Road to San Marcos Creek running east and west just south of Mission Road.

The project proposes to grade approximately 96 percent of the site. A major aspect of the development is the storm drain system meant to convey flows entering the site. The storm drain will terminate at the southerly property line. A large baffled outlet structure is proposed at the southerly terminus to ensure exit velocities are no great than current conditions. The storm drain will be constructed within a 30 foot wide storm drain easement. No structures are proposed in the easement. The area will be used for walkways and common open space Common access from Mulberry with secondary emergency only access from Laguna will be provided. The main circulation routes within the development will be paved with asphalt with the minor common drives surfaced with decorative porous pavers. A centrally located community area is proposed. Landscaped bio-retention basins, tot lots, and walkways will be constructed though out the site. All onsite runoff will drain to the bio-retention basins or other treatment areas and then to the proposed public storm drain at various locations. The storm drain pipes along the north and east boundary with tie directly to the new pipe. Runoff from the west will be collected is a lined drainage ditch which will convey flows to the outlet structure.

All proposed storm drain improvements will be within the project development footprint and are considered in this environmental analysis. Impacts will be less than significant.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? Less Than Significant Impact

VWD's 2008 Master Plan assumed that the project site would be developed with light industrial uses and assumed a water demand of 17,766 gpd. Under the proposed development, the project is expected to have a water demand of 32,571 gpd. This represents an increase of approximately 14,805 gpd. The Water and Sewer Study (VWD 2014a) did not indicate any impacts related to water supply. Therefore, impacts are less than significant.

e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? Less Than Significant Impact

As analyzed in Section XVII(b), due to an increase in density, the project will increase the demand for wastewater treatment as well as land outfall capacity. As noted in Section XVII(b), the project will pay Wastewater Capital Facility Fees per VWD Ordinance No. 176 and Wastewater Density Impact Fees per VWD Ordinance 177. This requirement is also noted in Table 1. These fees will be used by VWD to help fund the expansion and/or construction of wastewater treatment facilities to handle increased wastewater quantities and also the expansion of land outfall facilities. VWD considers payment of the fees as mitigation for the increase in treatment need. Therefore, impacts are less than significant.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? Less than Significant Impact

Solid waste service in the City is provided by a private franchise hauler, EDCO Waste and Recycling (EDCO), which handles all residential, commercial and industrial collections within the City. Waste collected by EDCO is hauled to the Escondido Resources Recovery Transfer Station where it is then transported to the Sycamore Sanitary Landfill in Santee.

The Escondido Transfer Station accepts mixed municipal waste, green materials, and construction/demolition materials. It has a daily capacity of 2,500 tons with a permitted capacity of 3,402 tons/day (CalRecycle 2014a). The Sycamore Sanitary Landfill has a daily permitted capacity of 3,965 tons/day of solid waste, with an anticipated closure date of 2031 (CalRecycle 2014b).

The Specific Plan identifies a trash bin, recycling bin, and green waste bin for each condominium unit. Based upon typical generation rate of 0.44 tons/unit/year, the 126 residential units proposed by the project are expected to generate 55.44 tons/year of solid waste. This does not consider any waste diversion through recycling. It is expected that 50 percent of this total volume will be diverted from the landfill through recycling, thus the volume going to the landfill is expected to be 27.72 tons/year or 0.08 tons/day.

Currently, approximately 2,380 tons of waste enters the Sycamore Canyon Landfill each day (City of San Diego 2013). Therefore, there is approximately 1,585 tons/day of capacity at the landfill. Thus, the project's contribution of 0.08 tons/day would be a less than significant impact.

g) Comply with federal, state, and local statutes and regulations related to solid waste? No Impact

The project will comply with all federal, state and local statutes and regulations related to solid waste, including proper handling of construction and demolition debris. Thus no impact is identified for this issue area.

V. MANDATORY FINDINGS OF SIGNIFICANCE

The following are Mandatory Findings of Significance in accordance with Section 15065 of the CEQA Guidelines.

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? Less Than Significant Impact With Mitigation Incorporated

The project site is currently undeveloped and does not support any sensitive habitat or sensitive species. Thus, implementation of the project would not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

A cultural resources study was prepared for the project and did not identify any resources on the site. Mitigation measures MM-CR-1 MM-CR-8 are included as a condition of project approval. These measures require the presence of an archaeological monitor and a Native American monitor during project grading in case any subsurface resources are identified. Provision of these monitors will reduce the potential for impacts to eliminate important examples of the major periods of California history or prehistory to below a level of significance. Therefore, this project has been determined not to meet this Mandatory Finding of Significance and impacts are less than significant with the incorporation of mitigation.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) Less Than Significant Impact

Cumulative impacts related to traffic, air quality and noise were analyzed in this CEQA document. Based upon the analysis, the project will not have any cumulative impact related to air quality, noise, and traffic.

All other impacts were site-specific (hazards/hazardous materials) and will not result in a significant cumulative impact. Therefore, this project has been determined not to meet this Mandatory Finding of Significance and impacts are less than significant with the incorporation of mitigation.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? Less Than Significant Impact with Mitigation Incorporated

In the evaluation of environmental impacts in this Initial Study, the potential for adverse direct or indirect impacts to human beings were considered in the response to certain questions in Sections I. Aesthetics, III. Air Quality, VI. Geology and Soils, VIII. Hazards and Hazardous Materials, IX. Hydrology and Water Quality, XII. Noise, XIII. Population and Housing, and XVI. Transportation and Traffic. As a result of this evaluation, there is no substantial evidence that there are adverse effects on human beings associated with this project. All impacts in these environmental issue areas are less than significant or mitigated to below a level of significance. Therefore, this project has been determined not to meet this Mandatory Finding of Significance and impacts are less than significant with the incorporation of mitigation.

VI. PERSONS AND ORGANIZATIONS CONSULTED

This section identifies those persons who prepared or contributed to preparation of this document. This section is prepared in accordance with Section 15129 of the CEQA Guidelines.

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VIII. MITIGATED NEGATIVE DECLARATION

City of San Marcos

The following Mitigated Negative Declaration is being circulated for public review in accordance with the California Environmental Quality Act Section 21091 and 21092 of the Public Resources Code.

Public Review Period: April 8 to April 28, 2014

Project Name: Mulberry Specific Plan

Project Applicant: D.R. Horton, Los Angeles Holdings Company, Inc, 100 East San Marcos Boulevard, Suite 350, San Marcos, CA 92078

Project Location: The 10.01-acre project site for the Mulberry Specific Plan is located in the City of San Marcos in North San Diego County, generally north of Mission Road and west of Mulberry Drive. The project site is undeveloped. The project site is bounded on the west by Mulberry Drive, on the east by existing homes on Borden Circle, on the north by existing homes of Prado Verde and Laguna Drive, and on the south by existing office/professional buildings and undeveloped land.

Project Description: The Mulberry Specific Plan project proposes a residential condominium project of 126 residential units with a mix of attached and detached style residences. The project is proposed to be constructed as a single-phase development.

Detached Residential - The project proposes 55 single-family detached condominium homes on the western portion of the project site. The detached homes will range from 1,685 to 2,000 square feet (s.f.) and feature three or four bedrooms, depending on the home plan and layout. The detached homes will two stories and will be under 24 feet in height.

Attached Residential - The project proposes 71 attached multi-family condominium homes on the eastern portion of the project site. The attached homes will range from 1,851 to 2,183 s.f. and feature three or four bedrooms, depending on the home plan and layout. The attached homes will be three stories with a maximum height of under 38 feet.

Parking – A total of 300 parking spaces are proposed as part of the project. This includes two covered spaces for each residential unit (252 spaces) plus an additional 48 guest parking spaces.

Recreation Component – A private recreation area is proposed in the north central portion of the project site and will be for the exclusive use of project residents and their guests. There will be a recreation area with a pool, restroom building, BBQs, tot lot and benches. A meandering paseo is also incorporated into the project design.

Proposed Roadways – Primary access to the project site will be via Mulberry Drive. A secondary emergency access driveway is proposed near the northwest corner of the project site and will connect to Laguna Drive via a secured gate. The internal road widths are generally 24 feet wide.

Utility Infrastructure– The project will connect to existing Vallecitos Water District (VWD) infrastructure for water and sewer service. VWD has an existing water connection and will provide service to the site through a line in Mulberry Drive. Onsite water circulation will be through an

8-inch pipe. VWD maintains an existing sewer line in Mulberry Drive and the project will tie into that line for sewer service via an 8-inch private line. As part of the project a segment of water pipeline and a segment of sewer pipeline will be upgraded. Specifically, a 465-foot segment of 6-inch wastewater pipeline will be upgraded to an 8--inch pipeline within Mulberry Drive. ~~Additionally, the project will upsize 1,538 feet of 8-inch wastewater pipeline in Mission Road to a 10-inch pipeline.~~

Water Quality Management – The project includes a comprehensive water quality management approach. The project incorporates bioretention features of various sizes for water quality and hydrology purposes. A total of 16,998 s.f. of bioretention areas are proposed on the project site. Additionally, the project will implement a variety of source control Best Management Practices (BMPs) to minimize the potential for pollutants such as sediment, trash, metals, bacteria, oil/grease and organics to reach the storm drain and off-site waterways.

Grading – Grading for the development associated with the Specific Plan includes 33,425 cubic yards (cy) of cut and 77,358 cy of fill with 43,933 cy of import. The import is expected to last for 30 days, with 100 truck trips per work day. A haul route permit from the City will be required for the import.

In conjunction with the grading the project will be installing a public storm drain system consistent with the City of San Marcos Drainage Master Plan. This storm drain will be triple 66-inch cast-in-place pipes.

IX. FINDINGS

This is to advise that the City of San Marcos, acting as the lead agency, has conducted an Initial Study to determine if the project may have a significant effect on the environmental and is proposing this Mitigated Negative Declaration based upon the following findings:

☐ The Initial Study shows that there is no substantial evidence that the project may have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

☒ The Initial Study identifies potentially significant effects but:

(1) Proposals made or agreed to by the applicant before this proposed Mitigated Negative Declaration was released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur.

(2) There is no substantial evidence before the agency that the project may have a significant effect on the environment.

Mitigation measures are required to ensure all potentially significant impacts are reduced to levels of insignificance. Mitigation proposed for the project includes:

MM-CR-1 An archeological monitor and a Luiseño Native American monitor shall be present during all earth moving and grading activities to assure that any potential cultural resources, including tribal, found during project grading be protected.

MM CR-2 Prior to beginning project construction, the Project Applicant shall retain a San Diego County qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. Any newly discovered cultural resource deposits shall be subject to cultural resources evaluation, which shall include archaeological documentation, analysis and report generation and take into account tribal customs and traditions.

MM-CR-3 At least 30 days prior to beginning project construction, the Project Applicant/Landowner shall enter into a Cultural Resource Treatment and Monitoring Agreement (also known as a pre-excavation agreement) with a Luiseño Tribe. The Agreement shall address the treatment of known cultural resources, the designation, responsibilities, and participation of professional Native American Tribal monitors during grading, excavation and ground disturbing activities; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains discovered on site.

MM-CR-4 Prior to beginning project construction, the Project Archaeologist shall file a pre-grading report with the City to document the proposed methodology for grading activity observation, which will be determined in consultation with the contracted Luiseño Tribe referenced in MM-CR-3. Said methodology shall include the requirement for a qualified archaeological monitor to be present and to have the authority to stop and redirect grading activities. In accordance with the agreement required in MM-CR-3, the archaeological monitor's authority to stop and redirect

grading will be exercised in consultation the Luiseño Native American monitor in order to evaluate the significance of any archaeological resources discovered on the property. Tribal and archaeological monitors shall be allowed to monitor all grading, excavation, and groundbreaking activities, and shall also have the authority to stop and redirect grading activities. The Luiseño Native American monitor shall be a participant in any pre-construction meetings that address archaeological issues.

MM-CR-5 The landowner shall relinquish ownership of all cultural resources collected during the grading monitoring program and, if appropriate, from any previous archaeological studies or excavations on the project site to the appropriate Tribe for proper treatment and disposition per the Cultural Resources Treatment and Monitoring Agreement referenced in MM-CR-3. Such treatment may include curation at a facility that meets the criteria contained in 36 C.F.R. Part 79, including those facilities operated and maintained by a Luiseño Tribe, or if requested by the appropriate Tribe, reburial on-site. All cultural materials that are deemed by the Tribe to be associated with burial and/or funerary goods will be repatriated to the Most Likely Descendant as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98.

~~In the event that curation of cultural resources is required, curation shall be conducted by an approved facility and the curation shall be guided by California State Historic Resource Commissions Guidelines for the Curation of Archaeological Collections. The City of San Marcos shall provide the developer final curation language and guidance on the project grading plans prior to issuance of the grading permit, if applicable, during project construction.~~

MM-CR-6 All sacred sites, should they be encountered within the project area, shall be avoided and preserved as the preferred mitigation, if feasible.

MM-CR-7 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. Suspected Native American remains shall be examined in the field the location of the find shall be kept secure. ~~and kept in a secure location at the site.~~ If the San Diego County Coroner determines the remains to be Native American, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. The NAHC must then immediately notify the "most likely descendant(s)" of the discovery. The most likely descendants(s) shall then make recommendations within 48 hours, and engage in consultation concerning treatment of remains as provided in Public Resources Code 5097.98.

MM-CR-8 If inadvertent discoveries of subsurface archaeological/cultural resources, not including human remains or associated burial goods which is addressed in MM-CR-7, are discovered during grading, the Developer, the project archaeologist, and the Luiseño Tribe under agreement with the landowner described in MM-CR-3 shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. Pursuant to California Public Resources Code Section 21083.2(b) avoidance is the preferred method of preservation for archaeological

resources. If the Developer, the project archaeologist and the Tribe cannot agree on the significance of mitigation for such resources, these issues will be presented to the Planning Director for decision. The Planning Director shall make a determination based upon the provisions of the California Environmental Quality Act with respect to archaeological resources and shall take into account the religious beliefs, customs, and practices of the Tribe. Notwithstanding any other rights available under law, the decision of the Planning Director shall be appealable to the Planning Commission and/or City Council.

MM-CR-9 Fill material brought onto the project site shall be clean of cultural resource material. The fill material shall be analyzed and confirmed by an archaeologist and/or Luiseño Native American monitor.

MM-N-1 A 4-foot high noise barrier shall be required at the patio/courtyard areas on select multi-family residences that face Mulberry Drive, as shown in **Figure 7**, Noise Barrier Location. Barriers could include walls, glass, plexi-glass or a combination of these materials to meet the required noise attenuation. Verification of the type of noise reduction barrier material shall be provided to the Planning Director for review and approval prior to grading permit issuance.

MM-N-2 A final noise assessment shall be prepared prior to the issuance of the first building permit. This final report would identify the interior noise requirements based upon architectural and building plans to meet the City's established interior noise limit of 45 dBA CNEL[2].

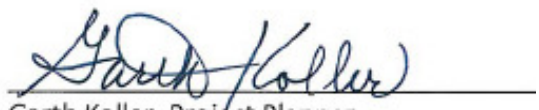
A MITIGATED NEGATIVE DECLARATION will be prepared.

If adopted, the Mitigated Negative Declaration means that an Environmental Impact Report will not be required. Reasons to support this finding are included in the attached Initial Study. The project file and all related documents are available for review at the Planning Division Counter at the City of San Marcos, 1 Civic Center Drive, San Marcos, CA 92069.

NOTICE

The public is invited to comment on the proposed Mitigated Negative Declaration during the review period.

Date of Determination: April 4, 2014



Garth Koller, Project Planner

[2] Interior noise levels of 45 dBA CNEL can easily be obtained with conventional building construction methods and providing a closed window condition requiring a means of mechanical ventilation (e.g., air conditioning).

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TECHNICAL APPENDICES A – M

are available at: www.san-marcos.net

(Departments/Development Services/Planning/Environmental Documents/D.R. Horton Mulberry)